TOSHIBA
Leading Innovation

Success based on quality.

LED Product catalogue 04/2014

E-CORE™
LED Lighting

Lighting increases a sense of security and well being

Light is malleable and can therefore be varied according to our needs and our environment. Light enables us to plan by being a solution in itself for even the most tailored requirements - whether traditional or innovative, practical or emotional. Toshiba has been producing lighting for over 120 years. With our wide range of products, we offer the optimal solution for perfect light.

Our LED lamps and luminaires meet the highest standards thanks to their efficiency and functionality as well as their outstanding aesthetics.

Be inspired by this product brochure with the many ways to achieve your lighting solution.

CONTENTS

Spotlights
I want to see just that

10

Outdoor
Go with safety

40

Recessed and Downlights
Light - as you like it

20

Lamps
LED - lighting for all moods

48

PACK Series
Ready for the perfect light

30

Reflector Lamps
The freedom to set the tone

58

Industrial
Lighten up your work

36

Modules
Optimal lighting conditions

72

Toshiba LED 4 | 56
History, environment, energy efficiency

Glossary 82 | 83
General and technical features

244/2009 / 1194/2012 57 | 71
The new EU-Regulations

E-CORE LED Lighting

TOSHIBA
Leading Innovation

A 120 year history of success

- VERY LOW COLOUR TOLERANCE
- EXTREMELY LONG LIFETIME
- NO HEAT IN BEAM
- EXTREMELY LOW POWER CONSUMPTION
- HARMONIOUS LIGHT COLOURS
- NO UV OR IR RADIATION
- LEAD AND MERCURY-FREE
- INSTANT QUALITY LIGHT
- DIMMABLE* BETWEEN 10 AND 100%

Lighting technology from Toshiba

1875
Hisashige Tanaka founded the company Tanaka Engineering Works (Tanaka Seizo-sho), which was later renamed Shibaura Engineering Works (Shibaura Seisaku-sho).

1890
Ichisuke Fujioka founded the company Hakunetsu-sha & Co. Ltd., Japan‘s first incandescent lamp factory. It produced carbon filament lamps.

1899
Renamed Tokyo Electric Company (Tokyo Denki).

1939
Merger of the Tokyo Electric Company and Shibaura Engineering Works Co. Ltd. (Tanaka Seisaku-sho) in Tokyo Shibaura Electric Co. Ltd. - In short, Toshiba.

1940
Production of Japan‘s first fluorescent lamp.

1980
Production of the world‘s first compact bulb-shaped fluorescent lamp - the "NeoBall" - characterised by its low energy consumption rate.

2007
Development of the E-CORE LED Downlights - with a lamp life of over 40,000 hours. LED becomes a universal means of lighting.

2008
Toshiba‘s Environmental Vision 2050 seeks to harmonize the environment with a better future for people. Toshiba Lighting therefore announces the termination of the production of conventional light bulbs in 2010.

2009
Production E-CORE LED Lamp: LED enters a new market by becoming compliant with classical lamps.

2010
March 2010: termination of the production of incandescent light bulbs.

2012
Expand further in the european market thanks to a fixture line-up covering commercial lighting applications.

2014
Toshiba Lighting takes accent illumination one step further: the NEOACCENT Shoplights integrate perfectly into different indoor architecture and enable an optimized heat management.

* Trailing edge dimmer; Compatibility list at www.toshiba.eu/lighting

E-CORE LED Lighting

TOSHIBA
Leading Innovation

Toshiba's environmental vision for 2050

"Improving our global eco-efficiency by 2050"

Do you believe it? At Toshiba, we do.

We are convinced that economy compliments ecology and that each corporation is responsible for the economical, social and environmental issues of its products.

One of many examples: after years of hard work, our LEDs use up to 80 % less energy than incandescent lamps.

Environment is our priority.

Welcome to Toshiba.

TOSHIBA eco style

LED: 3 letters for 1 solution

With such ambitious goals, Toshiba Lighting had to find means to produce much better light bulbs than incandescent and halogen lamps. This aim combined with economic and environmental issues: we blazed our path to the solution.

In the 70's, an LED was used as a coloured indicator or warning lights.

In 1996, we obtained white light LEDs.

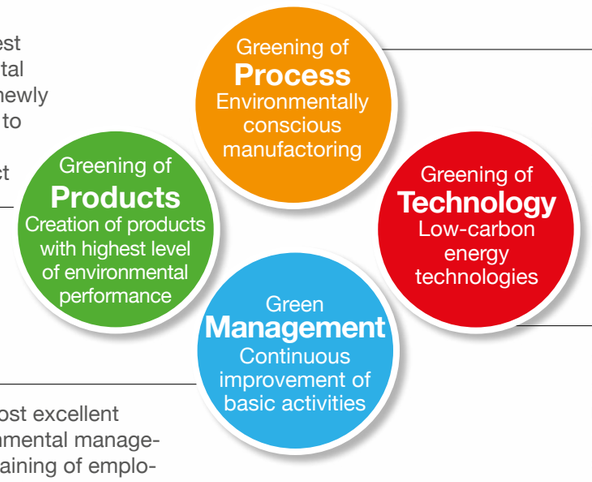
Today LEDs light large areas like museums, public places and parks to houses.

We began developing LEDs in the very early stages of the technology as we saw its potential for vast energy savings and long life. It was a gamble that we are now seeing a return on many years later. A true sign of our commitment to this innovative technology.

The four "Greens" and the management supporting them

Achieving the highest level of environmental performance in all newly developed product to reduce life-cycle enviromental impact

Aiming to be the most excellent company in environmental management through the training of employees and continuous improvement in environmental communications



Achieving one of the world's lowest levels of environmental impacts by reducing all manufacturing-related environmental impact

Contributing to provision of a stable power supply and mitigation of climate change through the low-carbon energy technologies

E-CORE LED Lighting

TOSHIBA
Leading Innovation

Who else but Toshiba!

Toshiba Lighting makes history

Back in 2008, we announced that we anticipated the end of the production of conventional incandescent lamps by 2010. And, as it happens we were right - with production completely shut down in 2010. Toshiba Lighting sees itself as the brand that researches, develops and manufactures with man and the environment in mind.

We have given a name to this consistent thought and action: Akari. Focus on the needs of people as well as thinking and acting sustainably. This is the driving force behind Toshiba‘s continuous innovation processes.

This shapes Toshiba E-CORE LED products and makes them unique and exemplary. Exemplary in: operating life, energy consumption, reduction of CO2 emissions by 80 % compared to conventional incandescent lamps, the range of the performance and colour spectrum and the resulting application possibilities. „Leading Innovation“ - in no other area is this claim of Toshiba more directly experienced than here.

E-CORE LED Lighting, your partner for the future

From the beginning, E-CORE LED Lighting was praised by a large public composed of retailers, professionals, architects and end users, as its 73% growth over last year shows.

Whether it be „a light to see“ for your general lighting or a „light accent“ for your shop displays, E-CORE LED Lighting will meet your needs.

Let’s discover our catalogue for 2014.
Just follow the light.

Why does everybody choose E-CORE LED Lighting?

Last year, hundreds of thousands of professionals and customers from the whole world chose our LEDs. How can we explain such a success?
Let’s ask them!

- Our LEDs last up to 60,000 hours without any maintenance
- Our LEDs use up to 80 % less energy than incandescent lamps
- Our LEDs withstand shock and vibration
- Our LEDs generate virtually no ultraviolet and no infra red
- Our LEDs can reduce CO2 emissions by 80 % compared to incandescent lamps
- Generate less heat thereby contributing towards lower air-conditioning costs
- A very wide range with many sizes and colours offering new creative opportunities

A very wide range for many different needs

With E-CORE LED Lighting, Toshiba wants to make as many people as possible benefit from its progress. For many years, our engineers worked altogether to develop our LED technology.

We are very demanding with ourselves in order to reach one goal: Answer all your lighting needs.

This catalogue is made for you.
Read it carefully: the future is under your eyes.

E-CORE LED Lighting

TOSHIBA
Leading Innovation

Spotlights

I want to see just that

To specifically set the scene, to put the focus on what deserves it, to emphasize what is important - these are the strengths of the spotlight.
Our spotlights are highly-efficient products for effective lighting effects - from subtle to obvious.

Their broad functionality and excellent design give you a great deal of leeway in the design of your spaces.

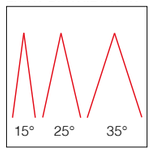
NEOACCENT Tracklight

Dynamic design, powerful accents, full flexibility - the NEOACCENT series offers everything to enable a timeless, high quality accent illumination with LED. The tracklight convinces through its discrete streamline look that perfectly integrates into different indoor architecture and enables an optimized heat management. With lumen packages of up to 2,600 lm the NEOACCENT series can efficiently replace 20 W and 35 W HID systems.

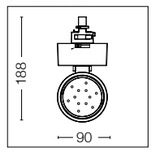
FEATURES

- Dimmable: Yes / Control on gear box
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION

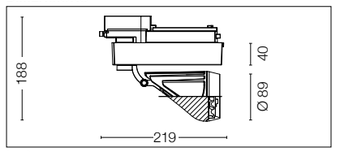


DIMENSIONS



(mm)

DIMENSIONS



(mm)

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUS00045B30	White	3000 K	1,600 lm	15°	13,830 cd	22 W	220 - 240 V	85	40,000 h
LEDEUS00046B30	White		1,600 lm	25°	8,000 cd		220 - 240 V	85	40,000 h
LEDEUS00047B30	White		1,500 lm	35°	3,300 cd		220 - 240 V	85	40,000 h
LEDEUS00054B30	White		2,420 lm	15°	21,170 cd	32 W	220 - 240 V	85	40,000 h
LEDEUS00055B30	White		2,370 lm	25°	10,970 cd		220 - 240 V	85	40,000 h
LEDEUS00056B30	White		2,340 lm	35°	4,885 cd		220 - 240 V	85	40,000 h
NEUTRAL WHITE									
LEDEUS00045B40	White	4000 K	1,700 lm	15°	14,830 cd	22 W	220 - 240 V	85	40,000 h
LEDEUS00046B40	White		1,700 lm	25°	8,700 cd		220 - 240 V	85	40,000 h
LEDEUS00047B40	White		1,600 lm	35°	3,700 cd		220 - 240 V	85	40,000 h
LEDEUS00054B40	White		2,600 lm	15°	22,780 cd	32 W	220 - 240 V	85	40,000 h
LEDEUS00055B40	White		2,550 lm	25°	11,800 cd		220 - 240 V	85	40,000 h
LEDEUS00056B40	White		2,520 lm	35°	5,260 cd		220 - 240 V	85	40,000 h

Exists also in black and silver. Please see our website or contact your representative for further information.
Additional High CRI filter available as accessory (see page 15)

E-CORE™ LED Lighting

DIMMABLE

DALI

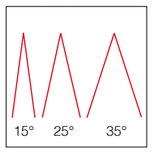
NEOACCENT Battery

The NEOACCENT Battery recessed luminaires enable solutions that can be combined individually to meet even the most unusual challenges. The single, double and triple installation frames can be fitted, according to the customer`s wishes and needs, with any of the varied range of light heads. These integrate seamlessly into the ceiling design, still offering maximum flexibility through adjustability - always projecting the light to where it is needed.

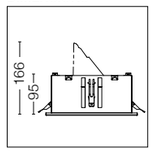
FEATURES

- Dimmable: Yes / DALI
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION

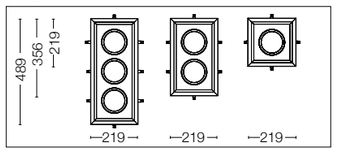


DIMENSIONS



(mm)

DIMENSIONS



(mm)

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
LIGHT HEAD - WARM WHITE									
LEDEUS00072D30	White	3000 K	1,600 lm	15°	13,830 cd	22 W	220 - 240 V	85	40,000 h
LEDEUS00073D30	White		1,600 lm	25°	8,000 cd		220 - 240 V	85	40,000 h
LEDEUS00074D30	White		1,500 lm	35°	3,300 cd		220 - 240 V	85	40,000 h
LEDEUS00082D30	White		2,420 lm	15°	21,170 cd	32 W	220 - 240 V	85	40,000 h
LEDEUS00083D30	White		2,370 lm	25°	10,970 cd		220 - 240 V	85	40,000 h
LEDEUS00084D30	White		2,340 lm	35°	4,885 cd		220 - 240 V	85	40,000 h
LIGHT HEAD - NEUTRAL WHITE									
LEDEUS00072D40	White	4000 K	1,700 lm	15°	14,830 cd	22 W	220 - 240 V	85	40,000 h
LEDEUS00073D40	White		1,700 lm	25°	8,700 cd		220 - 240 V	85	40,000 h
LEDEUS00074D40	White		1,600 lm	35°	3,700 cd		220 - 240 V	85	40,000 h
LEDEUS00082D40	White		2,600 lm	15°	22,780 cd	32 W	220 - 240 V	85	40,000 h
LEDEUS00083D40	White		2,550 lm	25°	11,800 cd		220 - 240 V	85	40,000 h
LEDEUS00084D40	White		2,520 lm	35°	5,260 cd		220 - 240 V	85	40,000 h

LEDEUS00063C	Installation frame for 1 Light head / White / Ceiling cut-out: 200 x 200 mm
LEDEUS00066C	Installation frame for 2 Light heads / White / Ceiling cut-out: 200 x 337 mm
LEDEUS00069C	Installation frame for 3 Light heads / White / Ceiling cut-out: 200 x 468 mm

Exists also in black and silver. Please see our website or contact your representative for further information.
Additional High CRI filter available as accessory (see page 15)

TOSHIBA
Leading Innovation

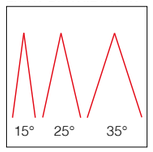
NEOACCENT Extractable

Individual shop architectures, diverse colour concepts and different ceiling designs: NEOACCENT Extractable recessed spotlights, with their two different colour temperatures, three housing colours and optional High CRI Filter, can be integrated perfectly into any retail space. Meanwhile, the light head‘s ability to be rotated and pivoted ensures optimum flexibility, even where space is limited. In addition, the Extractable spotlights can always be combined with the other products in the NEOACCENT series to create integrated lighting concepts.

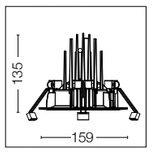
FEATURES

- Dimmable: Yes / DALI
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION

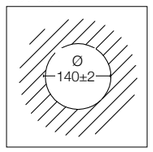


DIMENSIONS



(mm)

CUT-OUT



(mm)

DIMMABLE

DALI

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUS00027D30	White	3000 K	1,600 lm	15°	13,830 cd	22 W	220 - 240 V	85	40,000 h
LEDEUS00028D30	White		1,600 lm	25°	8,000 cd		220 - 240 V	85	40,000 h
LEDEUS00029D30	White		1,500 lm	35°	3,300 cd		220 - 240 V	85	40,000 h
LEDEUS00036D30	White		2,420 lm	15°	21,170 cd	32 W	220 - 240 V	85	40,000 h
LEDEUS00037D30	White		2,370 lm	25°	10,970 cd		220 - 240 V	85	40,000 h
LEDEUS00038D30	White		2,340 lm	35°	4,885 cd		220 - 240 V	85	40,000 h
NEUTRAL WHITE									
LEDEUS00027D40	White	4000 K	1,700 lm	15°	14,830 cd	22 W	220 - 240 V	85	40,000 h
LEDEUS00028D40	White		1,700 lm	25°	8,700 cd		220 - 240 V	85	40,000 h
LEDEUS00029D40	White		1,600 lm	35°	3,700 cd		220 - 240 V	85	40,000 h
LEDEUS00036D40	White		2,600 lm	15°	22,780 cd	32 W	220 - 240 V	85	40,000 h
LEDEUS00037D40	White		2,550 lm	25°	11,800 cd		220 - 240 V	85	40,000 h
LEDEUS00038D40	White		2,520 lm	35°	5,260 cd		220 - 240 V	85	40,000 h

Exists also in black and silver. Please see our website or contact your representative for further information.
Additional High CRI filter available as accessory (see page 15)

E-CORE™ LED Lighting

NEOACCENT CRI Filter

Please find here an indication of the colour rendition values when using the additional high CRI filter, as well as detailed photometric information:

		CCT (K)	Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
22 W	3000 K	3,000	85	82	91	98	83	83	88	88	67	18	75	79	69	83	97	76
	3000 K with filter	3,060	**96**	98	97	89	94	99	96	97	97	**87**	89	94	83	99	92	98
	4000 K	4,000	85	84	90	94	83	83	86	88	71	29	78	82	66	87	97	81
	4000 K with filter	4,230	**96**	97	97	89	97	97	94	97	97	**98**	90	96	74	99	93	95
32 W	3000 K	3,000	85	82	91	98	83	83	88	88	67	18	75	79	69	83	97	76
	3000 K with filter	3,060	**96**	98	97	89	94	99	96	97	97	**87**	89	94	83	99	92	98
	4000 K	4,000	85	84	90	94	83	83	86	88	71	29	78	82	66	87	97	81
	4000 K with filter	4,230	**96**	97	97	89	97	97	94	97	97	**98**	90	96	74	99	93	95

		LUMEN OUTPUT (lm)			CBCP (cd)		
	CCT (K)	15°	25°	35°	15°	25°	35°
22 W	3000 K	3,000	1,600	1,600	1,500	13,800	8,000	3,300
	3000 K with filter	3,060	1,215	1,215	1,140	10,210	5,920	2,440
	4000 K	4,000	1,700	1,700	1,600	14,830	8,700	3,700
	4000 K with filter	4,230	1,290	1,290	1,215	10,970	6,435	2,735
32 W	3000 K	3,000	2,420	2,370	2,340	21,170	10,970	4,885
	3000 K with filter	3,060	1,835	1,800	1,775	15,665	8,115	3,615
	4000 K	4,000	2,600	2,550	2,520	22,780	11,800	5,260
	4000 K with filter	4,230	1,975	1,935	1,915	16,855	8,730	3,890

	DESCRIPTION	SIZE OF PACKAGING (L x H x W)	GROSS WEIGHT
HIGH CRI FILTER			
LEDEUSX0002	Box of 10 pcs.	150 x 150 x 100 mm	374 g

TOSHIBA
Leading Innovation

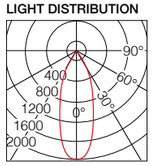
E-CORE LED TRACKLIGHT 1200

This elegant spotlight range stands for demanding lighting solutions with its high-tech components. Whether for the high-quality presentation of goods or for displaying art, the spectrum of different colour and reflected beam characteristics offers exemplary creative leeway. The excellent colour reproduction makes it a suitable substitute for previous applications of 20 W HID lamps. As a chip-on-board design, the appealing eye-catcher ups the ante in the quality stakes with a multi shadow-free spotlight, the greatest power density and optimised thermo-management.

FEATURES

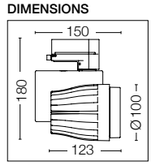
- Dimmable: No
- Electrical class: I
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C
- ENEC
- Twist & Lock cover

LIGHT DISTRIBUTION



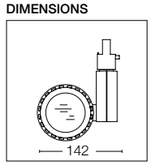
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



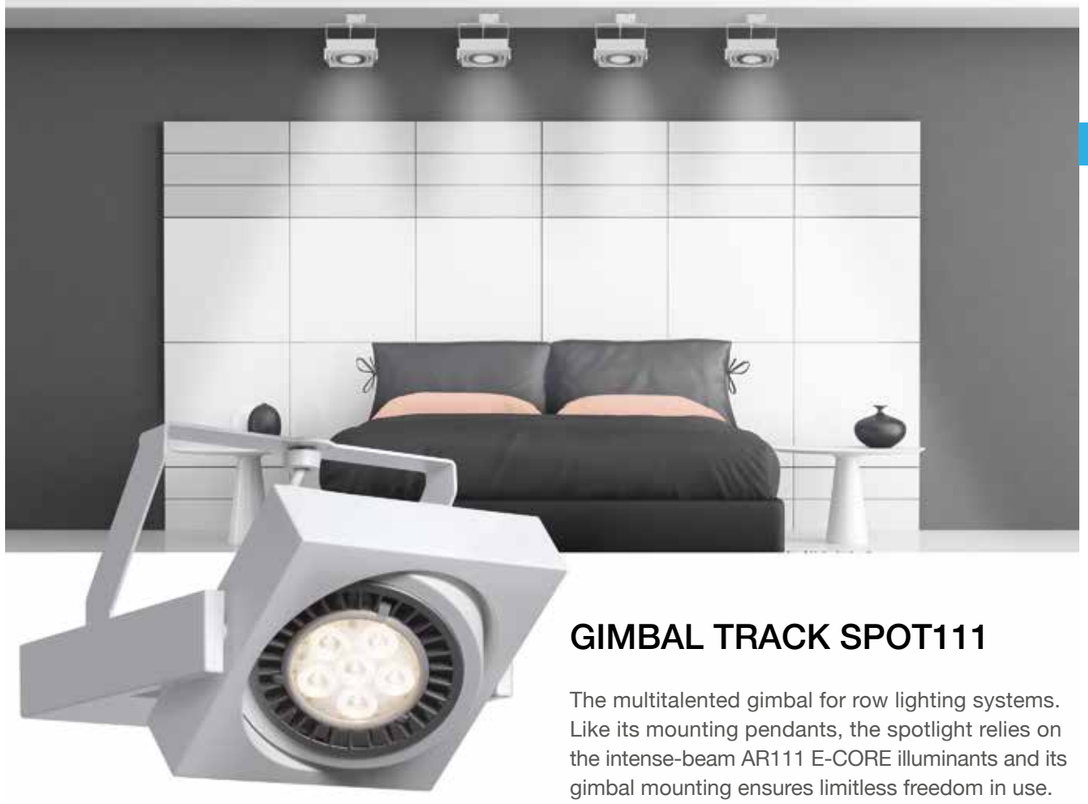
(mm)

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUS00006N30	White	3000 K	1,000 lm	40°	2,200 cd	21 W	220 - 240 V	80	40,000 h
LEDEUS00005N30	White		1,100 lm	22°	4,700 cd	21 W	220 - 240 V	80	40,000 h
NEUTRAL WHITE									
LEDEUS00006N40	White	4000 K	1,300 lm	40°	2,600 cd	21 W	220 - 240 V	80	40,000 h
LEDEUS00005N40	White		1,300 lm	22°	5,600 cd	21 W	220 - 240 V	80	40,000 h

Exists also in black and silver. Please contact your representative for further information.

LEDEUSX0001	Colour rendering improvement filter (R9)

COLOUR RENDERING	Ra	R9
3000 K	80	32
3000 K with filter	90	94
4000 K	80	24
4000 K with filter	87	92



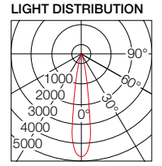
GIMBAL TRACK SPOT111

The multitalented gimbal for row lighting systems. Like its mounting pendants, the spotlight relies on the intense-beam AR111 E-CORE illuminants and its gimbal mounting ensures limitless freedom in use. The harmonious union of the light and illuminant are convincing thanks to their masterful radiation and they guarantee excellent structural integration.

FEATURES

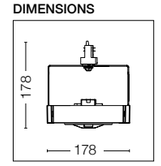
- Applicable lamp: E-CORE AR111
- Dimmable: No
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION



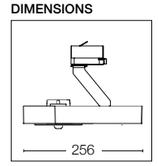
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



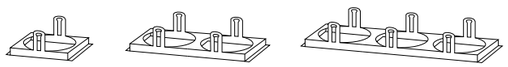
(mm)

	FINISH	RATED VOLTAGE	FREQUENCY	BASE
FIXTURE				
LEDEUS00001C	White	230 - 240 V	50 Hz	G53
LEDEUS00002C	Silver			
LEDEUS00003C	Black			

AR111 lamp to be ordered separately (see pages 66/67)
Our new AR111 10,5W and AR111 14,5W offer a wide range of colour temperatures, beam angles and wattages.

E-CORE™ LED Lighting

TOSHIBA
Leading Innovation



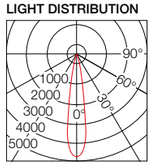
GIMBAL RECESSED SPOT111

As a logical addition to the TRACK SPOT the RECESSED SPOT111 is the perfect downlight insert solution. It creates a discrete lighting architecture – even with low ceilings – and allows you to design the ceilings whichever way you like. The modular structure of this system has room for up to three spots. In this way you create an individual, friendly and balanced lighting atmosphere in shops, hotels and restaurants.

FEATURES

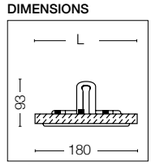
- Applicable lamp: E-CORE AR111
- Dimmable: No
- Protection rating: IP20
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION



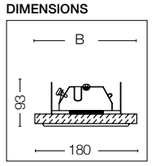
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



(mm)

	DESCRIPTION	FINISH	CEILING CUTOUT (mm)	RATED VOLTAGE	FREQUENCY	BASE
FIXTURE						
LEDEUS00013C	Lamp Fitting (A) including SELV transformer	White	-	230 - 240 V	50 Hz	G53
LEDEUS00014C		Silver	-			
LEDEUS00015C	Frame for 1 Lamp Fitting (B)	White	150 x 150	-	-	-
LEDEUS00016C		Silver		-	-	-
LEDEUS00017C	Frame for 2 Lamp Fitting (C)	White	150 x 295	-	-	-
LEDEUS00018C		Silver		-	-	-
LEDEUS00019C	Frame for 3 Lamp Fitting (D)	White	150 x 440	-	-	-
LEDEUS00020C		Silver		-	-	-

AR111 lamp to be ordered separately (see pages 66/67)
Our new AR111 10,5W and AR111 14,5W offer a wide range of colour temperatures, beam angles and wattages.

Spotlights

NEOACCENT Tracklight

22/32 W - up to 2,600 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 15°/25°/35°

NEOACCENT Battery

22/32 W - up to 2,600 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 15°/25°/35°

NEOACCENT Extractable

22/32 W - up to 2,600 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 15°/25°/35°

E-CORE LED TRACKLIGHT 1200

21 W - up to 1,300 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 22°/40°

GIMBAL TRACK SPOT111

fixture
white/silver/black
base G53

GIMBAL RECESSED SPOT111

fixture
lamp fitting
frame for 1/2/3 lamp fitting
white/silver
base G53

Recessed and Downlights

Light - as you like it

Anyone who wants to be able to use all possible means to save energy uses LED lighting solutions. In particular, our recessed luminaires and downlights inspire and save in many ways, because they are used almost universally - in large offices, classrooms, auditoriums, halls and corridors, shops and homes.

They combine an inspiring atmosphere of light, functional lighting and the highest energy and cost saving potential. A lighting solution could hardly be more complete.

NEOGRID

Energy efficiency on a completely new level – with up to 122 lm/W the LED Baselight NEOGRID outranges even modern fluorescent lamp technologies. DALI controllable lumen packages of up to 3,650 lm combined with excellent light quality and compliance to the EN 12464 make this unobtrusive louvre luminaire the perfect solution for today's office environments. All this is rounded off with a comprehensive product line-up, offering optimized flexibility and meeting various application requirements.

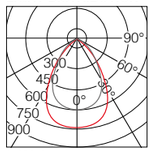
DIMMABLE

DALI

FEATURES

- Dimmable: Yes / DALI
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.9
- ENEC
- White or aluminium specular reflector surface
- DC capability: Yes

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS

(mm)

SYSTEM CEILING MODULE
600 x 600 mm
625 x 625 mm

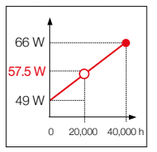
600/625 MODULE

	REFLECTOR	COLOUR TEMPERATURE	UGR	GRID CEILINGS	LUMINOUS FLUX	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUR00004D30N	White	3000 K	≤ 19	600 x 600 mm	• 3,100 lm	30 W	220 - 240 V	80	50,000 h
LEDEUR00005D30N	White			625 x 625 mm	• 3,100 lm	30 W	220 - 240 V	80	50,000 h
LEDEUR00006D30N	Aluminium		≤ 16	600 x 600 mm	• 3,370 lm	30 W	220 - 240 V	80	50,000 h
LEDEUR00007D30N	Aluminium			625 x 625 mm	• 3,370 lm	30 W	220 - 240 V	80	50,000 h
NEUTRAL WHITE									
LEDEUR00004D40N	White	4000 K	≤ 19	600 x 600 mm	• 3,350 lm	30 W	220 - 240 V	80	50,000 h
LEDEUR00005D40N	White			625 x 625 mm	• 3,350 lm	30 W	220 - 240 V	80	50,000 h
LEDEUR00006D40N	Aluminium		≤ 16	600 x 600 mm	• 3,650 lm	30 W	220 - 240 V	80	50,000 h
LEDEUR00007D40N	Aluminium			625 x 625 mm	• 3,650 lm	30 W	220 - 240 V	80	50,000 h

E-CORE LED BASELIGHT

This standard ceiling grid light lives up to its name: absolutely constant and homogeneous general lighting for extensive office or sales areas. It provides a rich 2,700 lm with an average power consumption of 57.5 W. With a glare reduction and UGR value of 19 in all fields of application of conventional fluorescent lamps it offers a completely new light quality because its constant light flux control ensures uniform brightness for the entire operating duration. This creates contemporary working conditions.

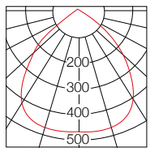
CONSTANT LUMEN OUTPUT



FEATURES

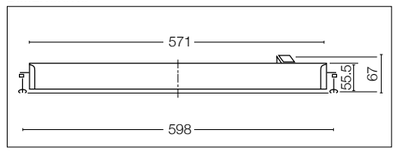
- Dimmable: No
- Protection rating: IP20
- Power factor: 0.95
- Constant lumen output: Yes

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

SYSTEM CEILING MODULE
600 x 600 mm

600 MODULE

	FINISH	COLOUR TEMPERATURE	UGR	LUMINOUS FLUX	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE								
LEDEUR00001N30	White	3000 K	19	2,700 lm	49 - 66 W	220 - 240 V	80	40,000 h
NEUTRAL WHITE								
LEDEUR00001N40	White	4000 K	19	2,700 lm	49 - 66 W	220 - 240 V	80	40,000 h

E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

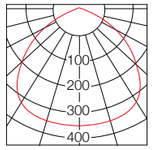
E-CORE LED PANEL

Along with its aerial design, this UGR 22 LED panel is extremely thin and emits homogeneously on its complete surface (3,400 lm / 4000 K / Ra 80). It can be recessed (in 600 mm grid ceiling) or suspended thanks to an elegant suspension kit (by separated ordering).

FEATURES

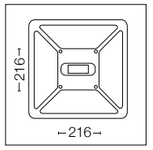
- Dimmable: Yes / 1-10 V
- Electrical class: II
- Protection rating: IP20
- Power factor: 0.9
- Temperature range: -5 °C – +40 °C

LIGHT DISTRIBUTION



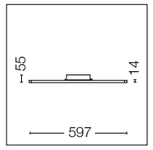
(cd/klm)

DIMENSIONS



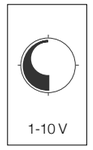
(mm)

DIMENSIONS



(mm)

DIMMABLE



	COLOUR TEMPERATURE	UGR	GRID CEILING	LUMINOUS FLUX	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
NEUTRAL WHITE								
LEDEUR00003A40	4000 K	≤ 22	597 x 597mm	3,400 lm	48 W	AC100 - 240 V	80	30,000 h
LEDEURX0001	Suspension kit (4 x 2 m)							

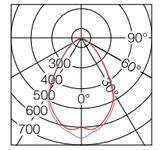
E-CORE LED DOWNLIGHT 1100/1600

Uniform light levels – the suitable job description for this high-performance downlight for the retail sector. With its simple, minimalist shape and flush mounting, it integrates excellently with your design concept. And the replaceable Toshiba LIGHT ENGINE makes it a sustainable long-term investment, wherever it‘s used.

FEATURES

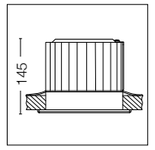
- Applicable lamp: E-CORE LED LIGHT ENGINE 2
- Dimmable: Yes / Trailing Edge phase control
- Electrical class: I
- Protection rating: IP20
- Power factor: > 0.7
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION



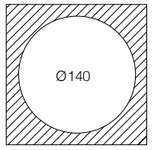
(cd/klm)

DIMENSIONS



(mm)

CUT-OUT



(mm)

DIMMABLE

	FINISH	COLOUR TEMPERATURE	UGR	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUD00049S30	White	3000 K	19	• 1,060 lm	72°	18 W	220 - 240 V	> 80	40,000 h
LEDEUD00062S30	White		16		36°		220 - 240 V	> 80	40,000 h
LEDEUD00050S30	White	3000 K	22	• 1,480 lm	72°	23 W	220 - 240 V	> 80	40,000 h
LEDEUD00064S30	White		19		37°		220 - 240 V	> 80	40,000 h
NEUTRAL WHITE									
LEDEUD00049S40	White	4000 K	19	• 1,060 lm	72°	18 W	220 - 240 V	> 80	40,000 h
LEDEUD00062S40	White		16		36°		220 - 240 V	> 80	40,000 h
LEDEUD00050S40	White	4000 K	22	• 1,530 lm	72°	23 W	220 - 240 V	> 80	40,000 h
LEDEUD00064S40	White		19		37°		220 - 240 V	> 80	40,000 h

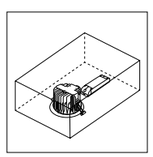
Exists also in black and silver. Please see our website or contact your representative for further information.

E-CORE LED Lighting

TOSHIBA
Leading Innovation

DIMMABLE

DALI



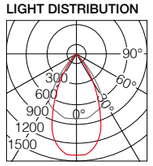
E-CORE LED DOWNLIGHT 3000

Event centers, conference rooms, cinemas – large spaces with sophisticated lighting design set the stage for this powerful downlight. Its compact dimensions and DALI controllability make it a convenient replacement for up to 2 x 32 W compact fluorescent and 1 x 35 W HID systems. Furthermore, a choice of different beam angles and UGR versions offers great flexibility and enables the use in various application fields – always optimally fulfilling the respective lighting task requirements.

FEATURES

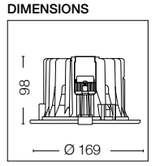
- Dimmable: Yes / DALI
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.9
- Temperature range: 5 °C – 35 °C
- 1 driver has to be ordered separately

LIGHT DISTRIBUTION



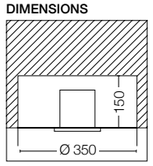
(cd/klm)

DIMENSIONS



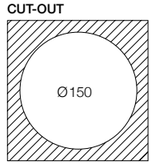
(mm)

DIMENSIONS



(mm)

CUT-OUT



(mm)

	FINISH	COLOUR TEMPERATURE	UGR	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUD00028D30	White	3000 K	19	2,680 lm	50°	46 W	220 - 240 V	80	50,000 h
LEDEUD00026D30	White		22	2,630 lm	73°		220 - 240 V	80	50,000 h
LEDEUD00029D30	White	3000 K	25	2,675 lm	55°	46 W	220 - 240 V	80	50,000 h
LEDEUD00128D30	White		28	2,730 lm	78°		220 - 240 V	80	50,000 h
NEUTRAL WHITE									
LEDEUD00028D40	White	4000 K	19	• 2,820 lm	50°	46 W	220 - 240 V	80	50,000 h
LEDEUD00026D40	White		22	• 2,760 lm	73°		220 - 240 V	80	50,000 h
LEDEUD00029D40	White	4000 K	25	2,815 lm	55°	46 W	220 - 240 V	80	50,000 h
LEDEUD00128D40	White		28	2,870 lm	78°		220 - 240 V	80	50,000 h

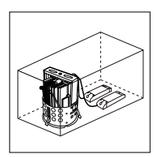
Exists also in black and silver. Please contact your representative for further information.

Renewal plate	Recessing diameter: 250mm, White: LEDEUDX0001, Black: LEDEUDX0003, Silver: LEDEUDX0005
LEK-50001CA01O	50 W CC Driver (separately order)

E-CORE™ LED Lighting

DIMMABLE

DALI



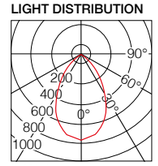
E-CORE LED DOWNLIGHT 6000

Brilliant, controllable light even with high ceilings: the DOWNLIGHT 6000 is the contemporary replacement light for areas where 70 W HID were traditionally used. High foyers, large auditoriums, open staircases or shops – with up to 5800 lumen this effective powerhouse covers all the bases in lighting design for public and commercial buildings.

FEATURES

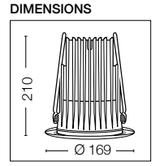
- Dimmable: Yes / DALI
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.9
- Temperature range: 5 °C – 40 °C
- 2 drivers have to be ordered separately

LIGHT DISTRIBUTION



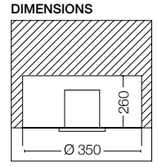
(cd/klm)

DIMENSIONS



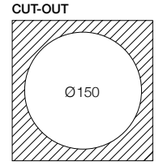
(mm)

DIMENSIONS



(mm)

CUT-OUT



(mm)

	FINISH	COLOUR TEMPERATURE	UGR	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUD00129D30	White	3000 K	28	5,650 lm	72°	92 W	220 - 240 V	80	50,000 h
NEUTRAL WHITE									
LEDEUD00129D40	White	4000 K	28	5,945 lm	72°	92 W	220 - 240 V	80	50,000 h

LEK-50001CA01O	50 W CC Driver (separately order, 2 drivers required)

TOSHIBA
Leading Innovation

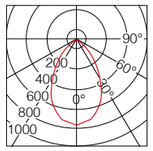
E-CORE LED BANKLIGHT

The basis of the DALI dimmable E-CORE LED BANKLIGHT is the E-CORE LED DOWNLIGHT 6000. Integrated into robust housing, simple surface mounting is possible. On account of its high light intensity and its long service life, the E-CORE LED BANKLIGHT is good for lighting in shopping malls, theatres, industrial plants or entryways.

FEATURES

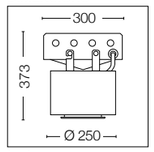
- Dimmable: Yes / DALI
- Electrical class: II
- Protection rating: IP20
- Power factor: > 0.95
- Temperature range: 0 °C – 40 °C
- 2 drivers have to be ordered separately

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

DIMMABLE

DALI

	FINISH	COLOUR TEMPERATURE	UGR	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUD00130D30	White	3000 K	28	5,650 lm	72°	92 W	220 - 240 V	80	50,000 h
NEUTRAL WHITE									
LEDEUD00130D40	White	4000 K	28	5,945 lm	72°	92 W	220 - 240 V	80	50,000 h
LEDEUDX0007	Cylinder case								
LEDEUDX0008	Surface-mounting frame								
LEK-50001CA01O	50 W CC Driver (separately order, 2 drivers required)								

E-CORE LED Lighting

Recessed luminaires and Downlights

NEOGRID

30 W - up to 3,650 lm
warm or neutral white
3000 K/4000 K
50,000 hours life (L70)

E-CORE LED DOWNLIGHT 3000

46 W - up to 2,870 lm
warm or neutral white
3000 K/4000 K
50,000 hours life (L70)
beam angle 50°/55°/73°/78°

E-CORE LED BASELIGHT

49-66 W - up to 2,700 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)

E-CORE LED DOWNLIGHT 6000

92 W - up to 5,945 lm
warm or neutral white
3000 K/4000 K
50,000 hours life (L70)
beam angle 72°

E-CORE LED PANEL

48 W - up to 3,400 lm
neutral white
4000 K
30,000 hours life (L70)

E-CORE LED BANKLIGHT

92 W - up to 5,945 lm
warm or neutral white
3000 K/4000 K
50,000 hours life (L70)
beam angle 65°/72°

E-CORE LED DOWNLIGHT 1100/1600

18/23 W - up to 1,530 lm
warm or neutral white
3000 K/4000 K
40,000 hours life (L70)
beam angle 36°/37°/72°

TOSHIBA
Leading Innovation

PACK Series

Ready for the good light

Interior designer popular classic: when it is not the luminaire but the light that is key, the Toshiba PACK Series products are ideal for restaurants, shops, and for hall or room lighting.

They can be integrated into the wall or ceiling, swivelled and dimmed at will, and have a wide beam angle or spot light depending on the application.

PACK omni mini 2

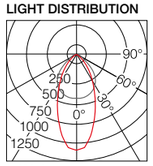
Small, efficient, simple – the all new PACK omni mini 2 opens up great opportunities for design integration and the easy step to efficiency, light quality and flexibility. Featuring the next generation of GX53-1 lamps, this compact downlight now appears in minimalistic dimensions, still with fixed and adjustable versions. The PACK omni mini 2 can replace up to 1 x 18 W conventional downlights and offers a replaceable light source – making it the easy and future-proof choice for energy saving in many applications.

NEW!
Available from August 2014

FEATURES

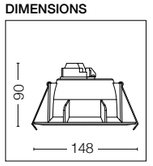
- Applicable lamp: E-CORE GX53-1 2
- Dimmable: No
- Electrical class: I
- Protection rating: IP20
- Power factor: 0.55
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION



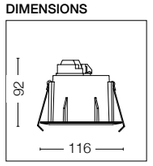
(cd/klm)

DIMENSIONS



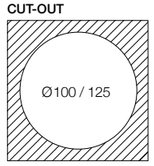
(mm)

DIMENSIONS



(mm)

CUT-OUT



	COMPLETE WITH LAMP	FINISH	CEILING CUT-OUT	ADJUS-TABLE	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE											
LEDEUD00152S27	Yes	White	100 mm	No	2700 K	• 420 lm	100°	5.7 W	220 - 240 V	> 80	40,000 h
LEDEUD00156S27	Yes	White	100 mm	No		• 580 lm	100°	8.3 W	220 - 240 V	> 80	40,000 h
LEDEUD00153S27	Yes	White	125 mm	Yes		• 480 lm	40°	5.7 W	220 - 240 V	> 80	40,000 h
LEDEUD00157S27	Yes	White	125 mm	Yes		• 660 lm	40°	8.3 W	220 - 240 V	> 80	40,000 h
NEUTRAL WHITE											
LEDEUD00156S40	Yes	White	100 mm	No	4000 K	• 620 lm	100°	8.3 W	220 - 240 V	> 80	40,000 h
LEDEUD00143C	No	White	100 mm	Fixture only - Order lamp separately (see page 77)							
LEDEUD00144C	No	White	125 mm								

E-CORE™ LED Lighting

Specifications and design may change without further notice.

PACK omni 2

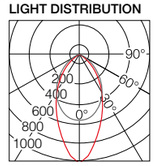
The classic downlight, reinvented. With its unobtrusive white housing, wide beam angles and powerful luminous flux, the PACK omni 2 is a suitable replacement for compact fluorescent lamps up to 2 x 26 W and a good allrounder in all secondary areas of buildings. What's new: the redesigned PACK omni 2 comes in two sizes and incorporates the next generation of the Toshiba LED LIGHT ENGINE – a light source that can be replaced in an instant and now offers 2,200 lm and DALI controllable versions (on demand).

NEW!
Available from October 2014

FEATURES

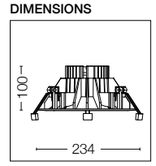
- Applicable lamp: E-CORE LED LIGHT ENGINE 2
- Dimmable: No / DALI controllable types on demand
- Electrical class: I
- Protection rating: IP20
- Power factor: 0.9
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION



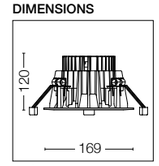
(cd/klm)

DIMENSIONS



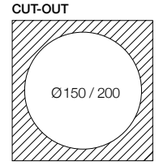
(mm)

DIMENSIONS



(mm)

CUT-OUT



(mm)

	COMPLETE WITH LAMP	FINISH	CEILING CUT-OUT	UGR	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE											
LEDEUD00145S30	Yes	White	150 mm	≤ 22	3000 K	980 lm	45°	12.7 W	220 - 240 V	> 80	40,000 h
LEDEUD00147S30	Yes	White		≤ 22		1,420 lm	45°	17.5 W	220 - 240 V	> 80	40,000 h
LEDEUD00149S30	Yes	White		≤ 22		1,960 lm	45°	24.0 W	220 - 240 V	> 80	40,000 h
LEDEUD00165S30	Yes	White	200 mm	≤ 22		980 lm	45°	12.7 W	220 - 240 V	> 80	40,000 h
LEDEUD00167S30	Yes	White		≤ 22		1,420 lm	45°	17.5 W	220 - 240 V	> 80	40,000 h
LEDEUD00169S30	Yes	White		≤ 25		1,960 lm	45°	24.0 W	220 - 240 V	> 80	40,000 h
NEUTRAL WHITE											
LEDEUD00146S40	Yes	White	150 mm	≤ 22	4000 K	1,020 lm	85°	12.7 W	220 - 240 V	> 80	40,000 h
LEDEUD00148S40	Yes	White		≤ 22		1,490 lm	85°	17.5 W	220 - 240 V	> 80	40,000 h
LEDEUD00150S40	Yes	White		≤ 22		2,050 lm	85°	24.0 W	220 - 240 V	> 80	40,000 h
LEDEUD00166S40	Yes	White	200 mm	≤ 22		1,020 lm	85°	12.7 W	220 - 240 V	> 80	40,000 h
LEDEUD00168S40	Yes	White		≤ 22		1,490 lm	85°	17.5 W	220 - 240 V	> 80	40,000 h
LEDEUD00170S40	Yes	White		≤ 25		2,050 lm	85°	24.0 W	220 - 240 V	> 80	40,000 h
LEDEUD00141C	No	White	150 mm	Non-dim fixture only – order lamp separately (see page 80)							
LEDEUD00161C	No	White	200 mm								
LEDEUD00142C	No	White	150 mm	DALI fixture only – order lamp separately (see page 81)							
LEDEUD00162C	No	White	200 mm								

Specifications and design may change without further notice.

TOSHIBA
Leading Innovation

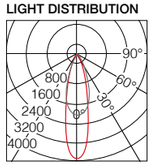
PACK accent 3

This miniaturized downlight range features the latest TOSHIBA PAR16 lamps and offers great flexibility for an attractive accent lighting in various application fields. Where in the past halogen lamps up to 50 W have been widely used, now this simple but highly efficient 5.4 W LED solution makes an appropriate alternative - convincing through brilliance, precise beam angles, excellent light quality and a very long lifetime of 40,000 h. The lighting head can be swiveled by 30°, allowing to target the light where it is needed, different beam angles and housing colours round off the portfolio.

FEATURES

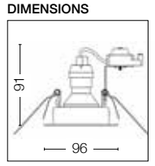
- Applicable lamp: E-CORE PAR16
- Dimmable: Yes / Phase control
- Electrical class: II
- Protection rating: IP20
- Power factor: 0.64
- Temperature range: 5 °C – 40 °C

LIGHT DISTRIBUTION



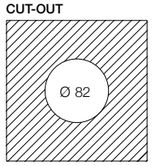
(cd/klm)

DIMENSIONS



(mm)

CUT-OUT



(mm)

DIMMABLE

	FINISH	COLOUR TEMPERATURE	LAMP LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE								
LEDEUD00135S30	White		• 355 lm		5.4 W	220 - 240 V	> 80	40,000 h
LEDEUD00136S30	Silver	3000 K	• 355 lm	40°	5.4 W	220 - 240 V	> 80	40,000 h
LEDEUD00137S30	Black		• 355 lm		5.4 W	220 - 240 V	> 80	40,000 h
LEDEUD00138S30	White		• 355 lm		5.4 W	220 - 240 V	> 80	40,000 h
LEDEUD00139S30	Silver	3000 K	• 355 lm	25°	5.4 W	220 - 240 V	> 80	40,000 h
LEDEUD00140S30	Black		• 355 lm		5.4 W	220 - 240 V	> 80	40,000 h
LEDEUD00132C	White							
LEDEUD00133C	Silver	Fixture only - Order lamp separately (see page 61)						
LEDEUD00134C	Black							

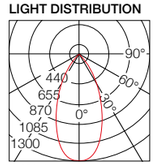
PACK accent PAR20

The PACK accent PAR20 line up provides you with a low luminance easy-to-fit solution, for decorative and architectural lighting. Equipped with an E-CORE retrofit PAR20 lamp (9 W), this spot light greatly reduces investment risk tackling demand for flexibility in the lighting design field. With the benefits of LED lighting, the PACK accent PAR20 offers a reliable lighting solution along with low-carbon footprint and minimum environmental impact.

FEATURES

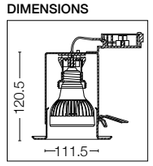
- Applicable lamp: E-CORE PAR20
- Dimmable: Yes / Phase control
- Electrical class: II
- Protection rating: IP20
- Power factor: 0.8
- Temperature range: 5 °C – 35 °C

LIGHT DISTRIBUTION



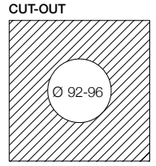
(cd/klm)

DIMENSIONS



(mm)

CUT-OUT



(mm)

DIMMABLE

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE								
LEDEUD00015S27	White		359 lm	40°	9 W	220 - 240 V	> 80	40,000 h
LEDEUD00016S27	Black	2700 K	278 lm	40°	9 W	220 - 240 V	> 80	40,000 h
LEDEUD00017S27	Silver		322 lm	40°	9 W	220 - 240 V	> 80	40,000 h
NEUTRAL WHITE								
LEDEUD00015S40	White		369 lm	40°	9 W	220 - 240 V	> 80	40,000 h
LEDEUD00016S40	Black	4000 K	285 lm	40°	9 W	220 - 240 V	> 80	40,000 h
LEDEUD00017S40	Silver		332 lm	40°	9 W	220 - 240 V	> 80	40,000 h

INDUSTRIAL

Lighten up your work

For industrial companies in particular, vision is key. That‘s why it‘s all the more important to use robust, high-performance light sources – such as Toshiba industrial light fixtures. They meet international standards and exceed your expectations. That‘s because they are durable, energy-efficient and low-maintenance, making them the most reliable industrial light fixtures of our time.

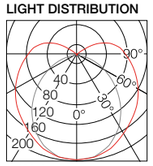
E-CORE LED WEATHERPROOF 2

The name says it all: designed to IP65, this robust diffuser luminaire is the ideal lighting solution for all areas with particular climatic or functional requirements. It is a replacement for T8 Lamp installations in warehouses, underground car parks, cold stores and other similar situations.

FEATURES

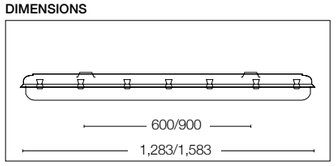
- Applicable lamp: E-CORE LED TUBE GX16t-5
- Dimmable: No (DALI dimmable on request)
- Electrical class: I
- Protection rating: IP65
- Power factor: > 0.9

LIGHT DISTRIBUTION



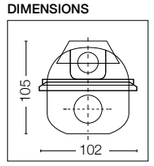
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



(mm)

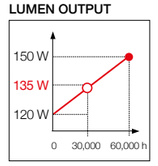
	COVER	COLOUR TEMPERATURE	LUMINOUS FLUX	GLOW WIRE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
NEUTRAL WHITE								
LEDEUP00003S40	PC	4000 K	2,760 lm	850 °C	32 W	220 - 240 V	80	40,000 h
LEDEUP00005S40			3,320 lm		40 W	220 - 240 V	80	40,000 h
LEDEUP00007S40	PMMA		2,930 lm	650 °C	32 W	220 - 240 V	80	40,000 h
LEDEUP00009S40			3,550 lm		40 W	220 - 240 V	80	40,000 h

Specifications and design may change without further notice.

E-CORE LED HIGHBAY 12000

Extremely robust, absolutely homogeneous and very efficient - the E-CORE LED HIGHBAY 12000 stands for up-to-date industrial lighting. With a luminous flux of ~11,000 lm, good light quality and UGR 20 and UGR 26 this tough luminaire is ideal for illuminating different functional areas. The E-CORE LED HIGHBAY is a suspended fixture for any use where robustness and long life time is a must.

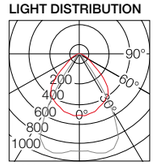
CONSTANT LUMEN OUTPUT



FEATURES

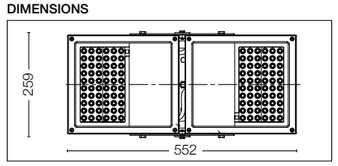
- Dimmable: No
- Electrical class: I
- Protection rating: IP65
- Power factor: 0.95
- Temperature range: -20 °C – +35 °C
- Constant lumen output (can be disabled if required)

LIGHT DISTRIBUTION



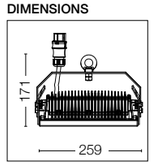
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	UGR	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
NEUTRAL WHITE								
LEDEUJ00005I50	5000 K	• 10,700 lm	≤ 26	90°	150 W	220 - 240 V	70	60,000 h
LEDEUJ00006I50		• 10,650 lm	≤ 20	60°		220 - 240 V	70	60,000 h

TOSHIBA
Leading Innovation

Outdoor

Go with safety

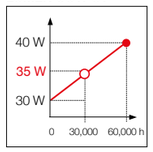
No one likes to be in dark parking lots or on unlit roads. Yet, for cost reasons, many cities practice the nightly shutdown of street lighting or the sparse lighting of car parks and public facilities.

This need not be so. Toshiba offers absolute cost-efficiency with energy-efficient outdoor lighting - combined with intelligent control systems, a very long life and excellent design. Toshiba outdoor lighting - making cities user-friendly.

E-CORE LED FLOODLIGHT 3000

Night-time lighting of buildings and other structures is a standard element of urban spatial design. This pivoting facade spotlight is the suitable tool for the job. Unbreakable, long-lasting and with an impressively uniform light output, it makes modern architectural lighting a reality. In figures, this represents 3,000 lumen at a power consumption of just 35 W and a nominal service life of 60,000 hours.

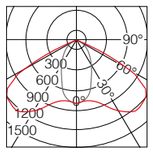
CONSTANT LUMEN OUTPUT



FEATURES

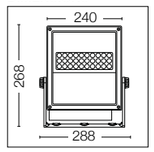
- Dimmable: No
- Electrical class: II
- Protection rating: IP65
- Power factor: 0.9
- Temperature range: -20 °C – +35 °C
- Constant lumen output (can be disabled if required)
- ENEC

LIGHT DISTRIBUTION



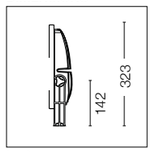
(cd/klm)

DIMENSIONS



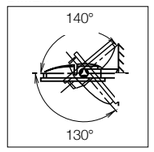
(mm)

DIMENSIONS



(mm)

DIMENSIONS



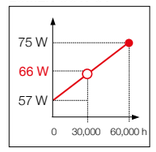
(mm)

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	IK	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUF00019I30	Silver	3000 K	2,015 lm	Narrow - 11°	07	30 - 40 W	220 - 240 V	80	60,000 h
LEDEUF00020I30			1,860 lm	Middle - 25°	07	30 - 40 W	220 - 240 V	80	60,000 h
LEDEUF00021I30			1,845 lm	Wide - 43°	07	30 - 40 W	220 - 240 V	80	60,000 h
LEDEUF00022I30			1,775 lm	Asym - 58° x 127°	07	30 - 40 W	220 - 240 V	80	60,000 h
NEUTRAL WHITE									
LEDEUF00019I40	Silver	4000 K	2,015 lm	Narrow - 11°	07	30 - 40 W	220 - 240 V	80	60,000 h
LEDEUF00020I40			1,860 lm	Middle - 25°	07	30 - 40 W	220 - 240 V	80	60,000 h
LEDEUF00021I40			1,845 lm	Wide - 43°	07	30 - 40 W	220 - 240 V	80	60,000 h
LEDEUF00022I40			1,775 lm	Asym - 58° x 127°	07	30 - 40 W	220 - 240 V	80	60,000 h
LEDEUF00019I50		5000 K	2,880 lm	Narrow - 11°	07	30 - 40 W	220 - 240 V	70	60,000 h
LEDEUF00020I50			2,655 lm	Middle - 25°	07	30 - 40 W	220 - 240 V	70	60,000 h
LEDEUF00021I50			2,640 lm	Wide - 43°	07	30 - 40 W	220 - 240 V	70	60,000 h
LEDEUF00022I50			2,540 lm	Asym - 58° x 127°	07	30 - 40 W	220 - 240 V	70	60,000 h

E-CORE LED FLOODLIGHT 5500

The swivelling architecture light called the E-CORE LED FLOODLIGHT 5500 ensures impressive, bright and thus very cost-effective lighting. You enjoy tremendous flexibility with your light design thanks to the finely graduated light intensities, three different Kelvin ranges and various beam angles. Furthermore, the constant luminous flux control over the entire operational life offers unvarying brightness.

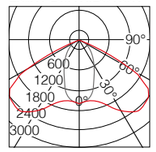
CONSTANT LUMEN OUTPUT



FEATURES

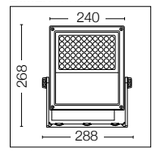
- Dimmable: No
- Electrical class: II
- Protection rating: IP65
- Power factor: 0.9
- Temperature range: -20 °C – +35 °C
- Constant lumen output (can be disabled if required)
- ENEC

LIGHT DISTRIBUTION



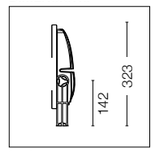
(cd/klm)

DIMENSIONS



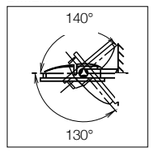
(mm)

DIMENSIONS



(mm)

DIMENSIONS



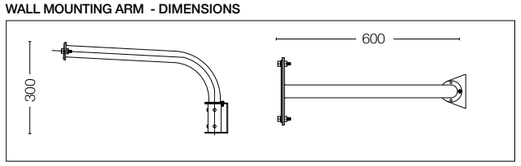
(mm)

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	IK	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
WARM WHITE									
LEDEUF00023I30	Silver	3000 K	4,035 lm	Narrow - 11°	07	57 - 75 W	220 - 240 V	80	60,000 h
LEDEUF00024I30			3,720 lm	Middle - 25°	07	57 - 75 W	220 - 240 V	80	60,000 h
LEDEUF00025I30			3,695 lm	Wide - 43°	07	57 - 75 W	220 - 240 V	80	60,000 h
LEDEUF00026I30			3,555 lm	Asym - 58° x 127°	07	57 - 75 W	220 - 240 V	80	60,000 h
NEUTRAL WHITE									
LEDEUF00023I40	Silver	4000 K	4,035 lm	Narrow - 11°	07	57 - 75 W	220 - 240 V	80	60,000 h
LEDEUF00024I40			3,720 lm	Middle - 25°	07	57 - 75 W	220 - 240 V	80	60,000 h
LEDEUF00025I40			3,695 lm	Wide - 43°	07	57 - 75 W	220 - 240 V	80	60,000 h
LEDEUF00026I40			3,555 lm	Asym - 58° x 127°	07	57 - 75 W	220 - 240 V	80	60,000 h
LEDEUF00023I50		5000 K	5,760 lm	Narrow - 11°	07	57 - 75 W	220 - 240 V	70	60,000 h
LEDEUF00024I50			5,315 lm	Middle - 25°	07	57 - 75 W	220 - 240 V	70	60,000 h
LEDEUF00025I50			5,280 lm	Wide - 43°	07	57 - 75 W	220 - 240 V	70	60,000 h
LEDEUF00026I50			5,080 lm	Asym - 58° x 127°	07	57 - 75 W	220 - 240 V	70	60,000 h

Accessories for E-CORE LED FLOODLIGHT 3000/5500

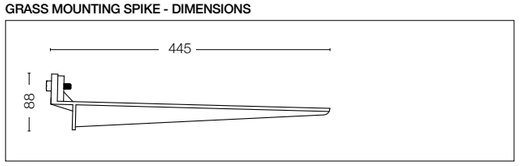
These practical accessories are the perfect complement to the LED Floodlight 3000 and 5500 models. The ground spike is designed for securing the LED Floodlight to the ground, and provides a secure and stable support for all applications close to the ground. The wall-mounting boom is the ideal solution for securing the LED Floodlight to facades or buildings. With this boom, the LED Floodlight can easily be offset from walls at a 60 cm distance, providing perfect illumination. Both accessories are available in white or silver.

WALL MOUNTING ARM - DIMENSIONS



(mm)

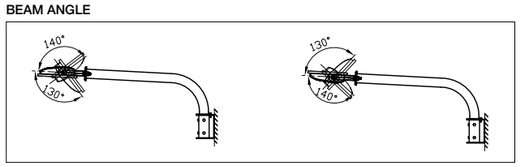
GRASS MOUNTING SPIKE - DIMENSIONS



(mm)

	FINISH	DESCRIPTION
WARM WHITE		
LEDEUFX0004	White	Grass Mounting Spike
LEDEUFX0005	Silver	
LEDEUFX0002	White	Wall mounting Arm
LEDEUFX0003	Silver	

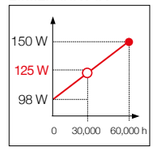
BEAM ANGLE



E-CORE LED ROADLIGHT

This road light complies with the EN 13201 standard and combines every technological and design advantage to create low-cost, low-maintenance lighting for the 21st century road network. The weatherproof design, eye-friendly soft-start function and constant lumen output control, plus 10 kV overload protection, combine to enable an exemplary 60,000 hour service life. Outstanding performance which quickly eclipses conventional 250 W systems.

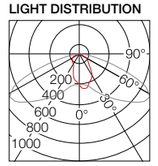
CONSTANT LUMEN OUTPUT



FEATURES

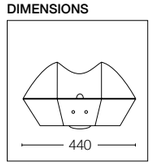
- Dimmable: Yes / step dimming: 50%
- Electrical class: II
- Protection rating: IP65
- Power factor: 0.92
- Temperature range: -30 °C – +45 °C
- Lighting complies with EN 13201
- Constant lumen output
- Top or side mounted
- ENEC

LIGHT DISTRIBUTION



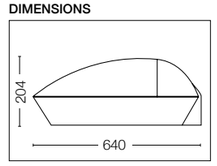
(cd/klm)

DIMENSIONS



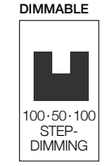
(mm)

DIMENSIONS



(mm)

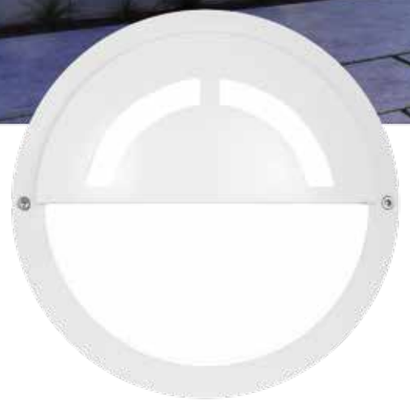
DIMMABLE



	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	IK	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	DIMMABLE (%)
CLASS II / NEUTRAL WHITE									
LEDEUW00003L50	Silver	5000 K	9,000 lm	07	98 - 150 W	220 - 240 V	70	60,000 h	100 / 50

E-CORE™ LED Lighting

TOSHIBA
Leading Innovation



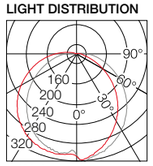
LED OUTDOOR BULKHEAD

The perfect solution for building vicinity lighting or pathway marking. The luminaire can be mounted in a range of positions, both as a surface installation and a recessed installation. Thanks to a selection of colours, it can also be successfully adapted to the surroundings. Its highly robust construction and durable LED technology, which doesn't require a separate operating device, guarantee long-term product satisfaction.

FEATURES

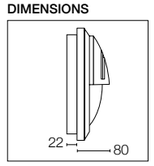
- Dimmable: No
- Electrical class: I
- Protection rating: IP54
- Power factor: 1 or > 0.9
- Temperature range: -20 °C – +35 °C
- Build-in or semi-recessed

LIGHT DISTRIBUTION



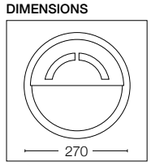
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



(mm)

	FINISH	COLOUR TEMPERATURE	LUMINOUS FLUX	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)
COOL WHITE							
LEDEUB00001N63	White	6300 K	186 lm	12 W	220 - 240 V	> 65	50,000 h
LEDEUB00004N63			120 lm	12 W	220 - 240 V	> 65	50,000 h
LEDEUB00002N63	Graphite metalic		186 lm	12 W	220 - 240 V	> 65	50,000 h
LEDEUB00005N63			120 lm	12 W	220 - 240 V	> 65	50,000 h
LEDEUB00003N63	Silver metalic		186 lm	12 W	220 - 240 V	> 65	50,000 h
LEDEUB00006N63			120 lm	12 W	220 - 240 V	> 65	50,000 h

OUTDOOR

E-CORE LED FLOODLIGHT 3000

30-40W - up to 2,880 lm
warm or neutral white
3000 K/4000 K/5000 K
60,000 hours life (L70)
beam angle 11°/25°/43°/58° x 127°
silver

E-CORE LED ROADLIGHT

98-150 W - up to 9,000 lm
neutral white
5000 K
60,000 hours life (L70)
silver

E-CORE LED FLOODLIGHT 5500

57-75 W - up to 5,760 lm
warm or neutral white
3000 K/4000 K/5000 K
60,000 hours life (L70)
beam angle 11°/25°/43°/58° x 127°
silver

LED OUTDOOR BULKHEAD

12 W - up to 186 lm
cool white
6300 K
50,000 hours life (L70)
white / graphite metalic / silver metalic

E-CORE LED Lighting

TOSHIBA
Leading Innovation

Lamps

LED - lighting for all moods

It is time to change because conventional incandescent lamps are a thing of the past. With the modern E-CORE LED lamps from Toshiba, you can create the atmosphere you want in the private and commercial sector - indoors and outdoors.

With all the advantages that LED lamps offer you:

- Very low energy consumption
- Extremely long life
- Low heat production
- Shock and vibration resistant

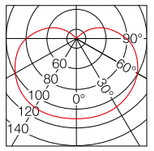
E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

E-CORE GLS WIDE 13W

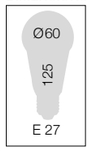
With 1,060 lumen, Toshiba‘s design classic is way ahead from an aesthetic and performance perspective. As a lamp with an intense beam of the retrofit segment, it is the substitute for all fields of application of 75 W bulbs. Its broad reflected beam angle makes it the ideal light source even for large rooms – in brief: powerful, elegant and unbeatably efficient.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

DIMMABLE

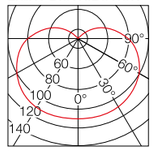
	COLOUR TEMPERATURE	LUMINOUS FLUX	DIMMABLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE									
LDAEU004C2710D	2700 K	1,060 lm	Yes	13 W	220 - 240 V	80	25,000 h	E27	A+

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE GLS WIDE 10,5W

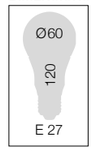
The new version of the popular archetype offers light in a familiar shape. However, this is the perfect product to replace the very popular 60 W incandescent bulb. With 806 lm, a warm color temperature and a good dimming capability this lamp offers the most comfortable ambience at your place.

LIGHT DISTRIBUTION



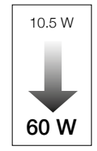
(cd/klm)

DIMENSIONS



(mm)

DIMMABLE



	COLOUR TEMPERATURE	LUMINOUS FLUX	DIMMABLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE									
LDAEU003C2710D	2700 K	806 lm	Yes	10.5 W	220 - 240 V	80	25,000 h	E27	A+

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE LED Lighting

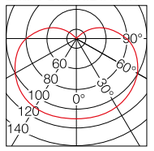
TOSHIBA
Leading Innovation

E-CORE GLS WIDE 7W

Less is more. A real light source whose design combines efficiency with classically styling. However, its revolutionary inner workings marry minimal technology and the maximum angle of radiation perfectly. A light that can be seen.

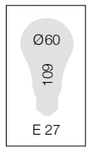
NEW!
Available from July 2014

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

DIMMABLE

	COLOUR TEMPERATURE	LUMINOUS FLUX	DIMMABLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE									
LDAEU007C2710D	2700 K	470 lm	Yes	7 W	220 - 240 V	> 80	25,000 h	E27	A+
NEUTRAL WHITE									
LDAEU007C4010D	4000 K	500 lm	Yes	7 W	220 - 240 V	> 80	25,000 h	E27	A+

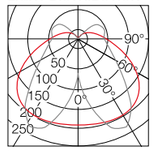
E-CORE LED Lighting

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting.
Specifications and design may change without further notice.

E-CORE CANDLE 6W

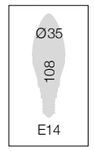
With its facetted crystal optics, this candle is a real head-turner. With exceptional light distribution and smooth dimming, this light is the magic every chandelier needs.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

DIMMABLE

	COLOUR TEMPERATURE	LUMINOUS FLUX	FINISH	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	DISTRI-BUTION	BASE	ENERGY LABEL
WARM WHITE										
LDCC0627CE4EUD2	2700 K	260 lm	clear	6 W	220 - 240 V	> 80	20,000 h	260°	E14	A
LDCC0627FE4EUD	2700 K	250 lm	frosted	6 W	220 - 240 V	> 80	20,000 h	–	E14	A

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

TOSHIBA
Leading Innovation

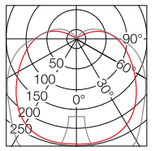
E-CORE SPHERICAL 6W

This is what the master of directed accent lighting looks like: dimmable and compact in size, the ideal light source for ambient lighting.

LED TUBE

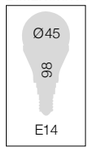
The LED TUBE lets you perfectly light up large rooms and offices. It will ensure bright light and a low consumption of energy. It is available either in neutral white or cold white, in 800 to 2,300 lm.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS

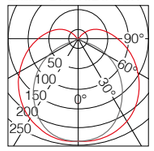


(mm)

DIMMABLE

	COLOUR TEMPERATURE	LUMINOUS FLUX	FINISH	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE									
LDGC0627CE4EUD	2700 K	250 lm	clear	6 W	220 - 240 V	> 80	20,000 h	E14	A
LDGC0627FE4EUD			frosted						

LIGHT DISTRIBUTION

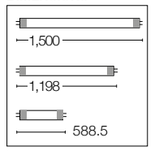


(cd/klm)

DIMENSIONS

(mm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	SIZE (mm)	ENERGY LABEL
NEUTRAL WHITE									
LDLEU005D4072	4000 K	800 lm	170°	9 W	100 - 240 V	> 80	30,000 h	588.5	A+
LDLEU005D4074		1,600 lm	170°	18 W	100 - 240 V	> 80	30,000 h	1,198	A+
LDLEU005D4075		2,100 lm	170°	23 W	100 - 240 V	> 80	30,000 h	1,500	A+
COOL WHITE									
LDLEU005D6572	6500 K	900 lm	170°	9 W	100 - 240 V	> 80	30,000 h	588.5	A+
LDLEU005D6574		1,700 lm	170°	18 W	100 - 240 V	> 80	30,000 h	1,198	A+
LDLEU005D6575		2,300 lm	170°	23 W	100 - 240 V	> 80	30,000 h	1,500	A+

E-CORE LED Lighting

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

TOSHIBA
Leading Innovation

This concerns all of us:

Energy efficient lighting solutions

It is time to upgrade

All over the world, solutions are being sought for efficient use of energy. One key area is lighting. In Europe, its share in total energy consumption is about 14%.

Already back in 2008, Toshiba announced the cessation of the production of conventional incandescent lamps because their energy efficiency is too low - they only reach efficiency classes D, E, F and G.

And in 2010, Toshiba actually ceased manufacturing incandescent lamps worldwide.

Since then, we have replaced incandescent lamps with modern LED lamps in almost all areas of lighting. Their low energy consumption and optimal light quality and excellent design make the transition so simple.

No matter where you need light, there is an energy-and cost-saving solution using Toshiba LED lamps and luminaires. Check for yourself, because this is the only way we can achieve the ambitious goals of energy reduction.

So simply take advantage of LED

Save on the cost of electricity - with our LED lamps and luminaires, this can be up to 85%.

Your investment will pay for itself sooner than you think. Modern LED lighting solutions offer a very long operating life. They pay for themselves over a very short period of time.

You also avoid the heat of conventional incandescent lamps. And, depending on the number of incandescent lamps used, this reduces the need for additional cooling.

And, you reduce unnecessary CO2 pollution of our environment.

Thus, we are in a position to do something ourselves - for ourselves and for the environment.

Let‘s enter our world!

Watts vs Lumen

Did you know?

What are Lumens?

Lumen (or Luminous flux) is the standard measure for the mount of light emitted by a light source.

Unlike light intensity (Candela), Lumens is a measure of the amount of light rather than its intensity.

How do I compare incandescent lamp using Lumens?

Using the table below you can see the Lumen values to be reached by LED Lamps and their incandescent equivalent (for non-directional lamp, as defined by EC244/2009).

Equivalence ratings for non-directional lamps (EC244/2009)

Rated lamp luminous flux ϕ [lm]			Claimed equivalent incandescent lamp power
CFL	Halogen	LED and other lamps	
125	119	136	**15 W**
229	217	249	**25 W**
432	410	470	**40 W**
741	702	806	**60 W**
970	920	1,055	**75 W**
1,398	1,326	1,521	**100 W**
2,253	2,137	2,452	**150 W**
3,172	3,009	3,452	**200 W**

Watts vs Lumens – Which should I use?

Lumens are the new way to measure and compare the light output from a lamp. Wattage is a measure of power consumed not light delivered. As lights are designed to emit light, the correct measurement is Lumen.

With LEDs it is not necessarily the wattage that tells you if it is more powerful than another LED lamp. Two LED lamps with the same wattage could have different Lumen values. To adequately compare the two lamps it is best compare Lumen output.

LED offers a true alternative to incandescent lamps and the drawbacks of other existing technologies.

LED lamps last longer, are more efficient, can be dimmed, and switch on instantly.

Reflector Lamps

The freedom to set the tone

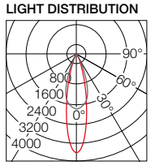
Lighting offers so many possibilities for the illumination of spaces, scenes and objects. With the rich variety of our reflector lamps, you can set the tone you want.

Whether as a ceiling or wall spotlight - Toshiba reflector lamps are available with various beam angles at the desired lighting levels and with plug-in or bayonet plugs. Just as you please.

E-CORE PAR16 9W

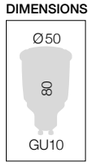
These elegant mains voltage spotlights with robust GU10 base shine with their excellent energy-saving credentials and ease of use. Suitable for a multitude of uses, they can be dimmed to offer atmospheric lighting or daylight-brightness accents – even at considerable distance. That is in brief the best-in-class lumen and light quality in the GU10 world.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

DIMMABLE

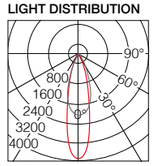
	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRC0927MU1EUD2	2700 K	520 lm	25°	• 1,900 cd	9 W	220 - 240 V	> 80	40,000 h	GU10	A
LDRC0927WU1EUD2			40°	• 950 cd						
LDRC0930MU1EUD2	3000 K	550 lm	25°	• 2,000 cd	9 W	220 - 240 V	> 80	40,000 h	GU10	A
LDRC0930WU1EUD2			40°	• 1,000 cd						
NEUTRAL WHITE										
LDRC0940MU1EUD2	4000 K	580 lm	25°	• 2,000 cd	9 W	220 - 240 V	> 80	40,000 h	GU10	A+
LDRC0940WU1EUD2			40°	• 1,000 cd						

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE PAR16 5,4W

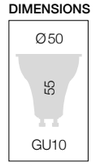
The E-CORE PAR16 5,4W sets a new efficiency level among LED GU10 lamps. Designed to replace 50 W halogen lamp, this lamp offers nearly 90% of energy savings. On top of that, the lamp has a 40,000 hour lifespan and is dimmable which converts it into a model of sustainability. Available in different color temperatures and two beam angles, it will fit into all kinds of applications.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

DIMMABLE

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRC0527MU1EUD	2700 K	355 lm	25°	• 1,320 cd	5.4 W	220 - 240 V	80	40,000 h	GU10	A+
LDRC0527WU1EUD			40°	• 640 cd						
LDRC0530MU1EUD	3000 K	355 lm	25°	• 1,320 cd	5.4 W	220 - 240 V	80	40,000 h	GU10	A+
LDRC0530WU1EUD			40°	• 640 cd						
NEUTRAL WHITE										
LDRC0540MU1EUD	4000 K	370 lm	25°	• 1,420 cd	5.4 W	220 - 240 V	80	40,000 h	GU10	A+
LDRC0540WU1EUD			40°	• 680 cd						

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

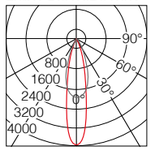
E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

E-CORE PAR16 3,5W

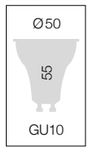
The E-CORE PAR16 3,5W offers 90% of energy savings. As it reaches 250 lm, this is the perfect product to replace 35 W GU10 halogen lamp. Its compact size, long lifespan and wide range will ensure to meet the requirements of your relamping projects.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



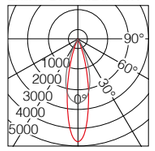
(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRC0427MU1EU2	2700 K	230 lm	25°	• 900 cd	3.5 W	220-240 V	80	40,000 h	GU10	A+
LDRC0427WU1EU2			40°	• 450 cd						
LDRC0430MU1EU2	3000 K	230 lm	25°	• 900 cd		220-240 V	80	40,000 h	GU10	A+
LDRC0430WU1EU2			40°	• 450 cd						
NEUTRAL WHITE										
LDRC0440MU1EU2	4000 K	250 lm	25°	• 960 cd	3.5 W	220-240 V	80	40,000 h	GU10	A++
LDRC0440WU1EU2			40°	• 480 cd						

E-CORE MR16 7W

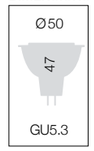
If you choose the same colour temperature, this low-voltage reflector lamp offers even more light intensity than the E-CORE MR16 5,2W: Depending on the choice, it offers from 360 to 380 lumen of light output with the same number of watts.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRA0727MU5EU	2700 K	360 lm	25°	• 1,830 cd	7 W	12 V	> 80	40,000 h	GU5.3	A
LDRA0727WU5EU			35°	• 1,050 cd						
LDRA0730MU5EU	3000 K	360 lm	25°	• 1,830 cd		12 V	> 80	40,000 h	GU5.3	A
LDRA0730WU5EU			35°	• 1,050 cd						
NEUTRAL WHITE										
LDRA0740MU5EU	4000 K	380 lm	25°	• 1,930 cd	7 W	12 V	> 80	40,000 h	GU5.3	A
LDRA0740WU5EU			35°	• 1,150 cd						

SELV 12V transformers. Please see compatibility list at www.toshiba.eu/lighting

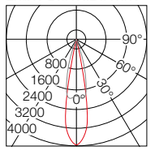
E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

E-CORE MR16 5,2W

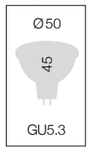
With this classic low-voltage reflector lamp and plug-in base, you will increase your light output from 260 to 300 lm in comparison to the E-CORE MR16 4W.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

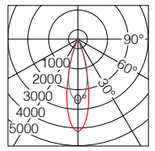
	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRA0527MU5EU3	2700 K	280 lm	25°	• 1,200 cd	5.2 W	12 V	> 80	40,000 h	GU5.3	A
LDRA0527WU5EU3			35°	• 650 cd						
LDRA0530MU5EU3	3000 K	290 lm	25°	• 1,250 cd		12 V	> 80	40,000 h	GU5.3	A
LDRA0530WU5EU3			35°	• 700 cd						
NEUTRAL WHITE										
LDRA0540MU5EU3	4000 K	300 lm	25°	• 1,250 cd	5.2 W	12 V	> 80	40,000 h	GU5.3	A
LDRA0540WU5EU3			35°	• 700 cd						

SELV 12V transformers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE MR16 4W

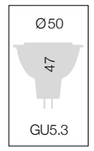
E-CORE makes our all-rounder for low-voltage lighting fit for the future. The GU5.3 pin-base lamp is available in several versions, providing maximum flexibility when it comes to economical accent and general lighting.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRA0527MU5EU2	2700 K	220 lm	25°	• 920 cd	4 W	12 V	> 80	25,000 h	GU5.3	A+
LDRA0527WU5EU2			35°	• 550 cd						
LDRA0530MU5EU2	3000 K	230 lm	25°	• 950 cd		12 V	> 80	25,000 h	GU5.3	A+
LDRA0530WU5EU2			35°	• 600 cd						
NEUTRAL WHITE										
LDRA0540MU5EU2	4000 K	260 lm	25°	• 1,050 cd	4 W	12 V	> 80	25,000 h	GU5.3	A+
LDRA0540WU5EU2			35°	• 650 cd						

SELV 12V transformers. Please see compatibility list at www.toshiba.eu/lighting

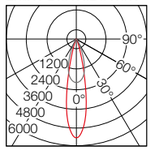
E-CORE LED Lighting

TOSHIBA
Leading Innovation

E-CORE AR111 10,5W

The AR111 pin-base lamps are in a class of their own in the low-voltage sector: pure luminosity for downlights, gimbal and catenary lights. Their potential for savings is also as eye catching as it is impressive.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS

(mm)

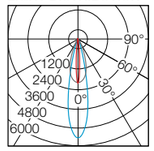
	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDREU001A27MA0	2700 K	• 600 lm	24°	3,400 cd	10.5 W	12 V	80	40,000 h	G53	A
LDREU001A27WA0		• 600 lm	40°	1,200 cd						
LDREU001A30MA0	3000 K	• 640 lm	24°	3,600 cd		12 V	80	40,000 h	G53	A
LDREU001A30WA0		• 640 lm	40°	1,300 cd						
NEUTRAL WHITE										
LDREU001A40MA0	4000 K	• 690 lm	24°	3,800 cd	10.5 W	12 V	80	40,000 h	G53	A
LDREU001A40WA0		• 690 lm	40°	1,300 cd						

SELV 12V transformers. Please see compatibility list at www.toshiba.eu/lighting.
Specifications and design may change without further notice.

E-CORE AR111 14,5W

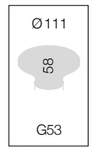
Thanks to the light quality, the light intensity and the beam angle variety, this range is the ideal solution to replace AR111 halogen lamps. It will convert any space into the most appealing one.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDREU002A27NA0	2700 K	• 810 lm	8°	16,000 cd	14.5 W	12 V	80	40,000 h	G53	A
LDREU002A27MA0		• 810 lm	24°	4,500 cd						
LDREU002A27WA0		• 810 lm	40°	1,600 cd						
LDREU002A30NA0	3000 K	• 860 lm	8°	16,700 cd		12 V	80	40,000 h	G53	A
LDREU002A30MA0		• 860 lm	24°	4,700 cd						
LDREU002A30WA0		• 860 lm	40°	1,700 cd						
NEUTRAL WHITE										
LDREU002A40NA0	4000 K	• 920 lm	8°	17,900 cd	14.5 W	12 V	80	40,000 h	G53	A
LDREU002A40MA0		• 920 lm	24°	5,000 cd						
LDREU002A40WA0		• 920 lm	40°	1,800 cd						

SELV 12V transformers. Please see compatibility list at www.toshiba.eu/lighting.
Specifications and design may change without further notice.

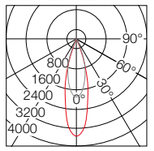
E-CORE™ LED Lighting

TOSHIBA
Leading Innovation

E-CORE PAR38 18,8W

If you need even more light, then you can choose the E-CORE PAR38 18,8W. With 980 lm, its wide range of colour temperatures and a service life of up to 40,000 hours makes it a true all-rounder.

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS

(mm)

DIMMABLE

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRC1627ME7EUD2	2700 K	950 lm	25°	• 3,200 cd	18.8 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC1627WE7EUD2			35°	• 1,650 cd						
LDRC1630ME7EUD2	3000 K	980 lm	25°	• 3,300 cd	18.8 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC1630WE7EUD2			35°	• 1,700 cd						
NEUTRAL WHITE										
LDRC1640ME7EUD2	4000 K	980 lm	25°	• 3,300 cd	18.8 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC1640WE7EUD2			35°	• 1,700 cd						
COOL WHITE										
LDRC1665ME7EUD2	6500 K	980 lm	25°	• 3,300 cd	18.8 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC1665WE7EUD2			35°	• 1,700 cd						

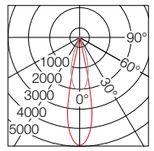
Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

E-CORE LED Lighting

E-CORE PAR30 14W

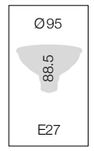
It can be used in almost all areas: Since you will receive the E-CORE PAR30 14W in warm white, neutral white and cold white. It can be dimmed and equipped with an E27 screw base to work as a high-voltage reflector lamp.

LIGHT DISTRIBUTION



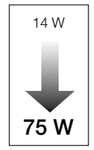
(cd/klm)

DIMENSIONS



(mm)

DIMMABLE



	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRC1327ME7EUD	2700 K	770 lm	23°	• 3,400 cd	14 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC1327WE7EUD			32°	• 1,500 cd						
LDRC1330ME7EUD	3000 K	780 lm	23°	• 3,400 cd	14 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC1330WE7EUD			32°	• 1,600 cd						
NEUTRAL WHITE										
LDRC1340ME7EUD	4000 K	780 lm	23°	• 3,400 cd	14 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC1340WE7EUD			32°	• 1,600 cd						
COOL WHITE										
LDRC1365ME7EUD	6500 K	780 lm	23°	• 3,400 cd	14 W	220 - 240 V	> 65	40,000 h	E27	A
LDRC1365WE7EUD			32°	• 1,600 cd						

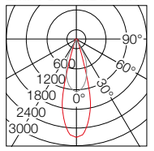
Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

TOSHIBA
Leading Innovation

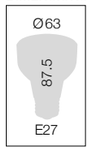
E-CORE PAR20 9W

The E-CORE PAR range's performance class, beam distribution characteristics and light quality leave no lighting wish unanswered. With its high efficiency, it provides the suitable way in to contemporary room lighting.

LIGHT DISTRIBUTION



DIMENSIONS



DIMMABLE

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	LUMINOUS INTENSITY	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	ENERGY LABEL
WARM WHITE										
LDRC0927ME7EUD	2700 K	370 lm	25°	• 950 cd	9 W	220 - 240 V	> 80	40,000 h	E27	A
LDRC0927WE7EUD			40°	• 450 cd						
NEUTRAL WHITE										
LDRC0940WE7EUD	4000 K	380 lm	40°	• 460 cd	9 W	220 - 240 V	> 80	40,000 h	E27	A

E-CORE LED Lighting

Dimmable on suitable dimmers. Please see compatibility list at www.toshiba.eu/lighting

Commission Regulation
EU No 1194/2012 has arrived

The new Ecodesign Directive

Europe is taking another step on the road to an energy-efficient future. With this purpose in mind, the EU issued the ErP Directive 2009/125/EC for energy-related products in 2009.

The Directive also outlines the changeover from non-directional lighting such as light bulbs for private use to energy-saving alternatives. Commission Regulation EU No 1194/2012 has been in force since September 1st 2013.

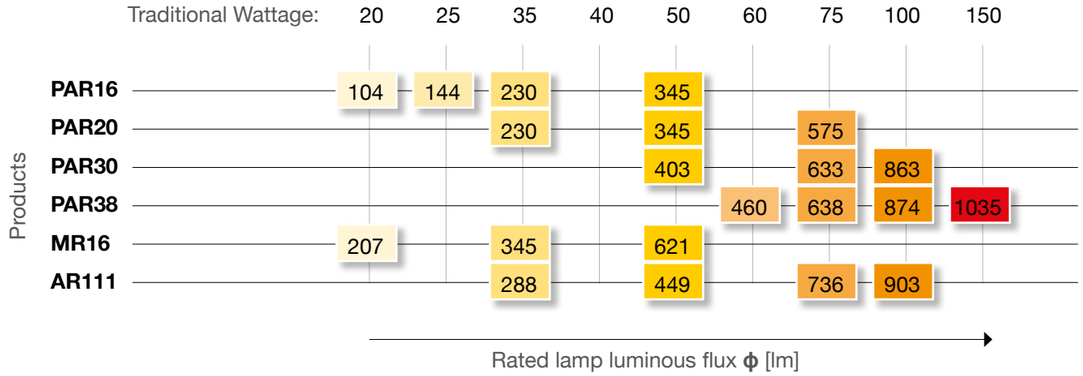
This Directive introduces new regulations for lamps with directional light and comes along with a new one for lamp packaging (EU/874/2012). The focus of the ErP Directive is our environment and the best way to look after it.

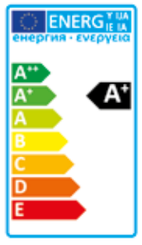
It is up to all of us to live up to this ambitious objective, which is why the EU is giving this responsibility to both consumers and manufacturers.

With its lamps, Toshiba is offering a range of products that is 100% ErP-compliant. All our products already hold the „greenest" energy efficiency ratings, A, A+ or A++.

Even though the consumer will have to get used to working with different units - lumens instead of Watts - the new Directive will make a considerable contribution to the ecological protection of our environment. We are pleased to be making this journey with you.

Equivalence table for directional lamps





The new energy efficiency label, in force since September 1st 2013, introduces the two new energy efficiency ratings A+ and A++. The older, lower classes F and G have been discontinued.

TOSHIBA
Leading Innovation

Modules

Optimal lighting conditions, minimal energy consumption.

In public spaces in particular, such as offices, presentation areas, and production sites, LED technology provides an important contribution to the environmental friendliness of your company. Here, Toshiba has just the right solution for every requirement – LED modules that can be easily integrated into your lighting system.

Depending on your requirements, these also come with dimmer drivers, allowing you not only to adjust your lighting conditions but also to optimise your heat management. No matter which solution you opt for, with our LED modules you not only provide the best possible lighting conditions for your company but also contribute to climate protection.

E-CORE LED TUBE GX16t-5

An innovation is conquering offices, presentation areas, and production sites.

Toshiba leads the field when it comes to environmental protection. So it is no surprise that the new E-CORE LED TUBE GX16t-5 impress through top performance and are competitively priced.

It‘s the ideal time for a switch-over – don‘t you think?

Every feature of the E-CORE LED TUBE GX16t-5 represents a good investment:

- Their 40,000-hour lifespan is double that of conventional fluorescent lamps.
- An external LED driver ensures especially high performance.
- The modules can be easily integrated into your existing lighting system.
- They impress thanks to an approximately 1.7 x greater lumen output than conventional LED lamps with integrated drivers.

THE LED evolution for professionals.

The E-CORE LED TUBE GX16t-5 are more than just a competitively priced entry-level model. Their output and optimal performance are just as impressive as other innovative LED concepts from Toshiba. And because their fittings are identical to those of conventional fluorescent lamps, using them is particularly easy.

Do you wish to present your sales area in an impressive way? This is also easily achieved with the E-CORE LED TUBE GX16t-5, because they are available in all lengths and a great variety of colours.

The choice is yours! Choose modern LED technology that is durable, highly efficient, and that features full luminance immediately after being switched on.

External LED driver

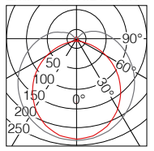
E-CORE LED Lighting

TOSHIBA
Leading Innovation

E-CORE LED TUBE GX16t-5

The E-CORE LED TUBE GX16t-5 is the perfect linear module to upgrade the linear fluorescent fixtures to LED. This module has been designed for manufacturers willing to implement LED technology at an affordable cost. Available in all lengths and many colour temperatures of traditional linear lamps, it enables to keep the same fixture bodies and makes the switch to LED very easy. As it works with a separated Toshiba driver, the light flux can be dimmed and it prevents from many disadvantages of other solutions like heat management or over load risks.

LIGHT DISTRIBUTION

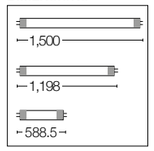


(cd/klm)

DIMENSIONS

(mm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	DIAMETER (mm)	SIZE (mm)	ENERGY LABEL
WARM WHITE									
LDL82D1530X1EU	3000 K	1,550 lm	14.5 W	45 - 190 V	83	40,000 h	26.7	588.5	A+
LDL84D2830X1EU	3000 K	3,100 lm	28 W	45 - 190 V	83	40,000 h	26.7	1,198	A+
LDL95D3630X1EU	3000 K	3,800 lm	36 W	90 - 190 V	83	40,000 h	28.8	1,500	A+
NEUTRAL WHITE									
LDL82D1540X1EU	4000 K	1,650 lm	14.5 W	45 - 190 V	83	40,000 h	26.7	588.5	A+
LDL84D2840X1EU	4000 K	3,300 lm	28 W	45 - 190 V	83	40,000 h	26.7	1,198	A+
LDL95D3640X1EU	4000 K	4,000 lm	36 W	90 - 190 V	83	40,000 h	28.8	1,500	A+
COOL WHITE									
LDL84D2865X1EU	6500 K	3,350 lm	28 W	45 - 190 V	83	40,000 h	26.7	1,198	A+
LDL95D3665X1EU	6500 K	4,000 lm	36 W	90 - 190 V	83	40,000 h	28.8	1,500	A+

Working on seperated driver: LEK-3301CA02, LEK-3301CA02D, LEK-330S02CA02, LEK-330S02CA02D
Please see connection details at www.toshiba.eu/lighting

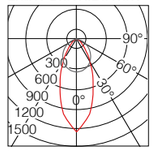
E-CORE™
LED Lighting

E-CORE GX53-1 2

This LED MODULE is compact and offers a great light output. Use this module with GX53-1 socket in your creations and get an economical and sustainable light source.

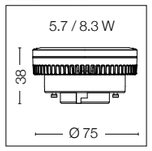
NEW!
Available from August 2014

LIGHT DISTRIBUTION



(cd/klm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE
WARM WHITE								
LDFEU009C27M50D	2700 K	• 510 lm	40°	5.7 W	220 - 240 V	80	40,000 h	GX53-1
LDFEU009C27W50D		• 510 lm	100°		220 - 240 V	80	40,000 h	GX53-1
LDFEU010C27M50D	2700 K	• 700 lm	40°	8.3 W	220 - 240 V	80	40,000 h	GX53-1
LDFEU010C27W50D		• 700 lm	100°		220 - 240 V	80	40,000 h	GX53-1
NEUTRAL WHITE								
LDFEU009C40M50D	4000 K	• 550 lm	40°	5.7 W	220 - 240 V	80	40,000 h	GX53-1
LDFEU009C40W50D		• 550 lm	100°		220 - 240 V	80	40,000 h	GX53-1
LDFEU010C40M50D	4000 K	• 750 lm	40°	8.3 W	220 - 240 V	80	40,000 h	GX53-1
LDFEU010C40W50D		• 750 lm	100°		220 - 240 V	80	40,000 h	GX53-1

Specifications and design may change without further notice.

TOSHIBA
Leading Innovation

Toshiba LED LIGHT ENGINE

A revolutionary new LED light source designed around the LED to maximise performance and efficiency

LED LIGHT ENGINE enables you to make choices with your lighting, and change your mind later.

This interchange ability allows you to extend the possibilities of your lit space and easily change the look and feel of the room depending on what you are lighting.

LIGHT ENGINE is a lamp in the traditional sense of the word.

- **You don‘t need to attach a driver.**
- **You don‘t need to add optical controls.**

Concept

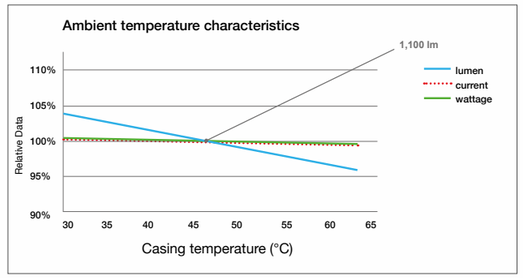
LIGHT ENGINE from Toshiba has been designed as an evolution to conventional lighting to maximise the potential of LED and provide long life, high efficiency, instant light and higher luminous flux.

LIGHT ENGINE is a new generation of replaceable light sources, using LED. Just as you would replace your fluorescent tube, the LIGHT ENGINE too can be replaced or exchanged. This means that you do not have to replace the entire luminaire should the LED fail but simply untwist the old lamp and replace it.

Design for Life and Efficiency

Without effective thermal management, LEDs will not operate well and could fail prematurely or operate inefficiently. The LIGHT ENGINE has been designed to take all that worry off your shoulders.

With its 40 mm cross-sectional silicon heat pad, the LIGHT ENGINE ensures that all the heat generated is driven directly to the heatsink, away from the LED chip.



Note: The values above is the relation of Tc and engines´s specifications where the product is turned on the following conditions:
· the input voltage is 230 V
· base-up positioned

LIGHT ENGINE uses a special connector that presses the LIGHT ENGINE‘s silicon heat pad down with exact pressure to the heatsink to ensure a good thermal connection with no air gaps.

LIGHT ENGINE offers 40,000 hours of life (L70), that‘s up to 4 times longer than CFL, dramatically reducing maintenance costs.

Delivering 91 lm/W, the LIGHT ENGINE offers high light output without draining your wallet. Combined with its dimming capabilities, the LIGHT ENGINE is the perfect choice for efficient, flexible, low energy lighting.

Reduce Investment Risk

TOSHIBA LED LIGHT ENGINE is a future-proof solution. Indeed through this engine, we created a new standardized socket: GH76p-5.
Thus, the LED engine becomes a lamp allowing end-users to upgrade their luminaires with the latest technology.

E-CORE™ LED Lighting

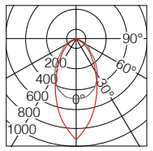
TOSHIBA
Leading Innovation

E-CORE LED LIGHT ENGINE 2

The unusual LED LIGHT ENGINE 2 from Toshiba offers creative users unlimited opportunities for a large number of lighting solutions. Depending on the application, you have a choice between different beam angles and luminous fluxes. The LIGHT ENGINE 2 is easy and safe to assemble.

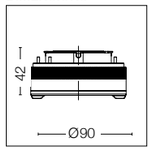
NEW!
Available from August 2014

LIGHT DISTRIBUTION



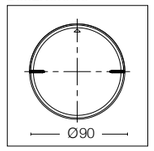
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



(mm)

	COLOUR TEMPERATURE	LUMINOUS FLUX	USEFUL OUTPUT	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	DIMM-ABLE
WARM WHITE										
LEV112313M830E	3000 K	• 1,020 lm	• 765 lm	50°	12.7 W	220 - 240 V	> 80	40,000 h	GH76p-5	No
LEV112313W830E		• 1,020 lm	• 690 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318M830E		• 1,480 lm	• 1,110 lm	50°	17.5 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318W830E		• 1,480 lm	• 965 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324M830E		• 2,040 lm	• 1,465 lm	50°	24 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324W830E		• 2,040 lm	• 1,285 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
NEUTRAL WHITE										
LEV112313M840E	4000 K	• 1,100 lm	• 825 lm	50°	12.7 W	220 - 240 V	> 80	40,000 h	GH76p-5	No
LEV112313W840E		• 1,100 lm	• 745 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318M840E		• 1,600 lm	• 1,200 lm	50°	17.5 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318W840E		• 1,600 lm	• 1,045 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324M840E		• 2,200 lm	• 1,580 lm	50°	24 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324W840E		• 2,200 lm	• 1,390 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	

E-CORE LED Lighting

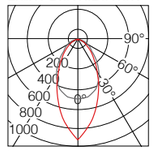
Specifications and design may change without further notice.

E-CORE LED LIGHT ENGINE DALI

The LED LIGHT ENGINE from Toshiba is the perfect module to development LED downlight systems and to adapt them to all the application requirements thanks to the wide range and the DALI dimming capability.

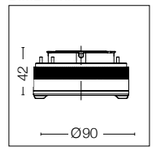
NEW!
Available from August 2014

LIGHT DISTRIBUTION



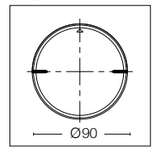
(cd/klm)

DIMENSIONS



(mm)

DIMENSIONS



(mm)

DIMMABLE

	COLOUR TEMPERATURE	LUMINOUS FLUX	USEFUL OUTPUT	BEAM ANGLE	WATTAGE	VOLTAGE 50/60 Hz	Ra (min)	LIFESPAN (L70)	BASE	DIMM-ABLE
WARM WHITE										
LEV112313M830ME	3000 K	• 1,020 lm	• 765 lm	50°	12.9 W	220 - 240 V	> 80	40,000 h	GH76p-5	0 / 5-100%
LEV112313W830ME		• 1,020 lm	• 690 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318M830ME		• 1,480 lm	• 1,110 lm	50°	17.8 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318W830ME		• 1,480 lm	• 965 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324M830ME		• 2,040 lm	• 1,465 lm	50°	24.2 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324W830ME		• 2,040 lm	• 1,285 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
NEUTRAL WHITE										
LEV112313M840ME	4000 K	• 1,100 lm	• 825 lm	50°	12.9 W	220 - 240 V	> 80	40,000 h	GH76p-5	0 / 5-100%
LEV112313W840ME		• 1,100 lm	• 745 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318M840ME		• 1,600 lm	• 1,200 lm	50°	17.8 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV162318W840ME		• 1,600 lm	• 1,045 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324M840ME		• 2,200 lm	• 1,580 lm	50°	24.2 W	220 - 240 V	> 80	40,000 h	GH76p-5	
LEV222324W840ME		• 2,200 lm	• 1,390 lm	80°		220 - 240 V	> 80	40,000 h	GH76p-5	

DC capability: Yes

Specifications and design may change without further notice.

TOSHIBA
Leading Innovation

DIMMABILITY

Dimming of lights

DIMMABLE

LED lights can be dimmed without sacrificing light quality. This is the main difference from lights fitted with fluorescent or high-pressure discharge lamps. Dimming also saves more energy. There are different types of dimming.

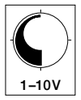
DALI

DIMMABLE

Luminaires are controlled by the digital DALI (Digital Addressable Lighting Interface). This standard, adopted by all manufacturers, overcomes the disadvantages of the 1 – 10 V principle and is being used increasingly, particularly in more complex installations. DALI offers a two-wire line that is protected against polarity reversal, with noise-resistant digital signal transmission, direct addressability, compact instruction set, error feedback and defined brightness values which are independent of line length. DALI is also supported by building and light management systems.

1 – 10 V

DIMMABLE



Luminaires can be dimmed via the 1 – 10 V interface. A voltage level between 1 V and 10 V is converted into corresponding lamp brightness.

Step dimming

DIMMABLE

Streetlights have a facility for step dimming via a second, dry-contact circuit. When the second supply is switched to the lamp, the luminous flux and power consumption are reduced to approx. 50 %. This provides a very simple way of reducing the light level at night, enabling further energy savings at times when road usage is low.

Phase control

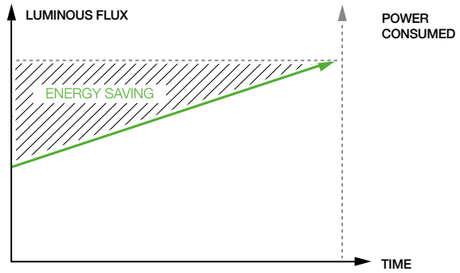
Phase control widely used for incandescent and halogen lamps dimming this analogic control method apply also to LED lamps. Because there is no general compatibility between all dimmers available on the market, Toshiba has provided a list of recommended dimmers on its website www.toshiba.eu/lighting.

CONSTANT LUMEN OUTPUT

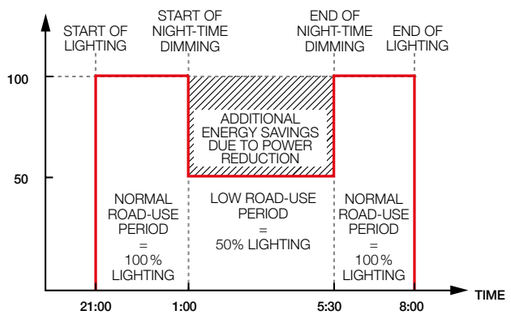
Constant luminous flux over the life of the lamp

The drop in luminous flux due to the LED technology over the service life of the system is compensated by increasing the power input. This results in constant and uniform photometric performance differentiating strongly TOSHIBA products from standard LED systems whose lumen output drastically drops over time lighting.

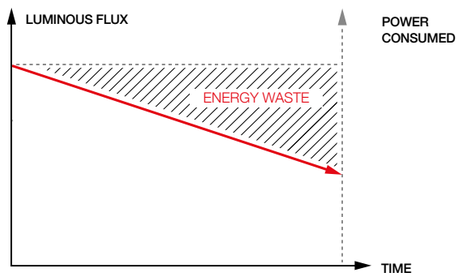
WITH CONSTANT LUMEN OUTPUT
=> STABLE PHOTOMETRIC PERFORMANCE
OPTIMUM POWER CONSUMPTION



POWER CONSUMPTION %
EXAMPLE: STEP DIMMABLE E-CORE LED ROADLIGHT CONTROLLED BY TIMER.



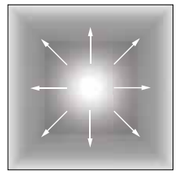
WITHOUT CONSTANT LUMEN OUTPUT
=> DECREASING PHOTOMETRIC PERFORMANCE
ENERGY WASTE



Basic Photometric Units

There are several photometric base quantities in the definition of light sources, which characterise different qualities.

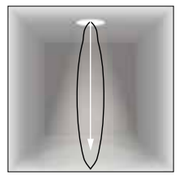
LUMINOUS FLUX (Phi/lm)



Luminous flux ϕ in lm (Lumen)

The total radiating power emitted by a light source, which the eye perceives as light.

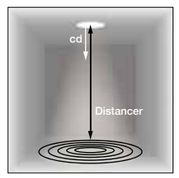
LUMINOUS INTENSITY (I/cd)



Luminous intensity I in cd (candela)

The luminous flux of a light source per solid angle. With the same luminous flux, the light intensity increases the more the light source focuses the light.

ILLUMINANCE (E/lx)



Illuminance E in lx (Lux)

A measure of lighting power per lit surface. A minimum luminance is specified for many visual tasks and must be considered in the planning of the visual task and choice of light source.

Colour Rendering Index Ra

Colour Rendering Index (CRI) is a measure of how well a light source is able to accurately reproduce colours of objects being lit respective to the colour temperature (CCT) of the light source. The higher the colour rendering index, the more naturally the colours of an object are reproduced and therefore perceived by the observer. The sun has the highest CRI of 100. Most artificial light source are below that. The colour rendering index is determined using 8 standardised test colour references.

Dimmability by trailing edge phase control

DIMMABLE

Luminaires can be dimmed very easily using trailing edge phase control. The advantage of trailing edge phase control compared with circuits in which the voltage is controlled by a resistance is that they have a very low power loss and are widely used in existing installations. The main disadvantage of trailing edge phase control is the non-sinusoidal current profile. Because current and voltage do not have the same shape, so-called distortion reactive power occurs. Shifting the current backwards compared with the voltage curve has the same effect as an inductive load, which electricity supply companies can only tolerate at low power levels. Leading edge phase control is not recommended for Toshiba lamps. Because there is no general compatibility between all dimmers available on the market, Toshiba has provided a list of recommended dimmers on its website www.toshiba.eu/lighting.

Colour temperature (K Kelvin)

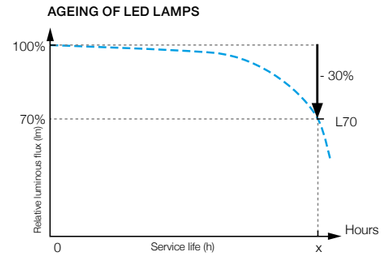
Colour temperature is a measure of the colour effect of a light source. Colour temperature is defined as the temperature of a black body which belongs to a particular light colour of this emission source.
Typical colour temperatures for light sources are:

- below 3300 K = warm white, preferred for interior lighting
- 3300 K to 5300 K = neutral white, typical light colour for office, industrial and exterior lighting
- above 5300 K = cool white, especially common in exterior lighting.

L70 service life of LED light sources

LEDs are characterised by their excellent service life. Because LEDs hardly ever fail completely, the service life is defined as having an L70 value. Their useful life is considered to be over when the luminous flux has dropped to 70% of the initial luminous flux. After this time the LEDs age at a dramatically accelerated rate.
The service life of an LED light source is not set by the LEDs alone, the other electrical components and the thermal design are also a factor. Therefore the given service life varies from product to product.

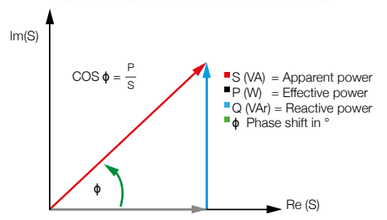
AGEING OF LED LAMPS



Power factor λ = cos ϕ

The LED light sources need driver modules to operate which act capacitively from an electrical point of view. This leads to a phase shift between voltage and current consumption and consequently the apparent power S (given in Volt Amperes VA) has an effective power proportion P (Watts) and a reactive power Q (Volt Ampere reactive VAr). The relationship between effective power P and apparent power S is represented as the power factor λ.

VECTOR DIAGRAM OF APPARENT POWER S



E-CORE LED Lighting

Product specifications and configurations, and availability of products are subject to change. Variations in product design and product features are subject to change. Colours may vary from illustration. Errors and omissions excepted.
© Copyright 2014. Picture credits: Toshiba, Fotolia.com

TOSHIBA Leading Innovation

www.toshiba.eu/lighting

This catalogue also for your tablet (iOS / Android)

PP_ENG_04/14

Specifications and design as of April 2014.
Specifications and design may change without further notice.

E-CORE™ LED Lighting

TOSHIBA
Leading Innovation